DOCUMENT RESUME

ED 248 373 CE 039 693

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|---|---|
| TITLE | The Productivity Management System. |
| INSTITUTION | State Fair Community Coll., Sedalia, Mo. |
| SPONS AGENCY | Missouri State Dept. of Education, Jefferson City. Research Coordinating Unit. |
| PUB DATE | 84 |
| NOTE | 162p.; Parts of this document may not reproduce well due to light type. |
| PUB TYPE | Guides - Classroom Use - Materials (For Learner) (051) |
| EDRS PRICE | MF01/PC07 Plus Postage. |
| DESCRIPTORS | Adult Education; Business Administration; Career Education; Evaluation; Goal Orientation; *Improvement; *Improvement Programs; Planning; *Productivity; *Program Implementation; Quality of Life |
| IDENTIFIERS | *Quality of Working Life |

ABSTRACT

The five modules presented in this document correspond to the five major phases of a productivity management system. A system overview provides an outline of module contents. The modules cover these phases: awareness, planning and analysis, assessment and preparation, training and implementation, and evaluation and maintenance. Each module is comprised of these components: an overview in outline form, outlines of the subsections of the main topic (or phase), and supplemental materials. These supplemental materials include articles, exercises, case studies, and a list of suggested films and audiovisual aids. A bibliography is provided for each module. (YLB)

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# THE PRODUCTIVITY MANAGEMENT SYSTEM

Funded by:

Missouri Department of Education
Research Coordinating Unit
Jefferson City, Missouri 65102

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## SYSTEM OVERVIEW

I. Productivity improvement may be viewed as a continuous, iterative, orderly process.

II. The major phases of the process are:

A. Awareness

B. Planning and Analysis

C. Assessment and Preparation

D. Training and Implementation

E. Evaluation and Maintenance

III. These major phases are present in most successful improvement efforts, although their sequence may vary.

IV. Awareness

A. General identification and communications of internal productivity issues are vital:

1. To raise the level of awareness and commitment of top management/decision makers

2. To insure that the organization understands the importance of productivity

3. To raise the level of awareness and commitment among employees

B. Review sources of valuable information or issues related to productivity within the organization:

1. Current financial report

2. Internal audit reports

3. Organizational studies

4. Operational studies

C. Review sources of information external to your organization:

1. Trade publications

2. Economic reports

3. Seminars/workshops

4. Consultants

D. Identify external forces which impact your organization:

1. Economy

2. Competition

3. What others are doing

4. Regulations

V. Planning and Analysis

A. Determine how productivity improvement is going to fit within your current business strategy:

1. Define productivity in your own organization's terms

2. Relate productivity to your organization's goals and objectives

B. Establish productivity as an explicit management responsibility:

1. Establish a common framework for management and communications

2. Integrate productivity and quality of work life into the management process

C. Determine the potential value to your organization of the different available approaches to productivity improvement:

1. Consider the prevailing management style

2. Consider the natural barriers that your organization might present in one approach as opposed to another

D. Review your organization's track record in productivity and quality of work life:

1. What has been done in the past?

2. What are you doing now?

E. Identify leverage points for improvement

F. Involve the right people early

G. Keep the long-term perspective

VI. Assessment and Preparation

A. Determine relative improvement potential by:

1. Assessing operational opportunities
2. Assessing leadership and support

B. Determine organization and structure:

1. Function manager versus productivity manager
2. Organizational structure

C. Establish productivity goals

D. Select and plan approach for your organization:

1. Determine support systems
2. Assess skills required
3. Determine barriers
4. Establish rewards and recognition systems
5. Assess employee-management relations
6. Secure management commitment
7. Design measurement system
8. Design performance feedback system

VII. Training and Implementation

A. Train managers and employees to provide them with:

1. An understanding of their roles
2. New knowledge
3. New skills

B. Implement the productivity improvement effort through:

1. Enlisting the participation and support of others
2. Communicating effectively what you want to do
3. Initiating and operating the effort

VIII. Evaluation and Maintenance

A. Document the progress of your productivity improvement efforts:

1. Measure results

2. Analyze findings

a. What worked?
b. What failed?
c. Why?

B. Report results and recommendations to top managers and decision makers

C. Modify failing or marginal efforts

D. Diffuse successful efforts:

1. Publicize results

2. Build on successes

# MODULE I

# AWARENESS

MODULE I - AWARENESS

OVERVIEW

I. Messages involved in awareness programs

A. The need for productivity and quality of work life improvement

B. The expected benefits of improved productivity and quality of work life

C. What is being done in the organization?

1. Results of current efforts

2. Recognition of significant contributions to improved productivity and quality of work life

D. Education on techniques and approaches for accomplishing improved productivity and quality of work life

II. Who in the organization has a role in the awareness program?

A. Senior Level Management

1. To become aware of productivity and quality of work life issues

2. To insure that the organization understands the importance of productivity improvement

3. To determine the appropriate priority for productivity emphasis

4. To participate personally in recognition of accomplishments

5. To provide climate of continuity for productivity emphasis

B. Middle Management

1. To become aware of productivity and quality of work life issues

2. To design and carry out the systems to communicate and support the awareness messages

C. Foremen/First Line Supervisors

1. To become aware of productivity and quality of work life issues

2. To provide the link between the organization's goals and the people who are producing

3. To provide day-to-day continuity for productivity emphasis

D. Employees

1. To become aware of productivity and quality of work life issues

2. To communicate upwards

3. To make suggestions

4. To understand the relationship of productivity to job performance

III. Awareness is communicated through

A. Internal Communications

1. Company newsletters

2. Brochures

3. Small group meetings

4. Management briefings

B. External Sources

1. Public seminars/workshops

2. TV and radio spots

3. Speeches and lectures

4. Newspaper and magazine articles

Subsection 1.1 - Understanding of Importance

I. Importance of productivity

A. What is productivity?

1. Output
Input - labor, materials, capital, energy

2. Working smarter, not harder

3. Getting more out of what you put in

B. Productivity is not:

1. Profitability

2. Speed up

C. What is quality of work life?

1. Difficult to define, because each person has own definition

2. Two perspectives:

a. Employee: Subjective evaluation of total environment, "Are my goals being satisfied in the attainment of the organization's goals? To what degree?"

b. Management: The process of aligning the work environment so that employee goals are optimized in the attainment of the organization's goals.

3. Our definition for this course is:

"A generic phrase that covers a person's feelings about every dimension of work, including economic rewards and benefits, security, working conditions, organization, and interpersonal relationships, and its intrinsic meaning in a person's life."

D. What is the relationship between productivity and quality of work life?

1. Productivity can affect quality of work life.

2. Quality of work life can affect productivity.

E. Benefits your organization can derive from improving its productivity and quality of work life:

1. Increased profits

2. Improved competitive position

3. Improved employee satisfaction

4. Growth

5. Improved communications through employee involvement

6. Preserved job security

7. Relieved pressures of rising costs in labor, capital, materials, and energy

8. Reduced waste and conserved resources

9. Enhanced customer satisfaction

10. Reduced impact of staff shortages and budget cuts

11. Enhanced flexibility of response to changing economic conditions

12. Better utilization of employee skills

F. Consequences of declining productivity

1. Productivity decrease

2. Cost per unit increase

3. Less competitive

4. Market and sales decline

5. Profitability decline

6. Negative effects upon

a. Capital

b. Materials

c. People

7. Further productivity decrease

G. Effects of increasing productivity

1. Productivity increase

2. Cost per unit decrease

3. More competitive

4. Market, sales, profitability increase

5. Positive effects on

a. Capital

b. Materials

c. People

6. Further productivity increase

H. How is Productivity increased? Productivity gains come about in five ways by changing the input-output ratio.

$$\text{Productivity} = \frac{\text{OUTPUT}}{\text{INPUT}}$$

1. $\frac{\uparrow}{\uparrow}$ Output increases faster than input; "managed growth."

2. $\frac{\downarrow}{\downarrow}$ Input decreases more than output (e.g., phasing out an old product, closing an inefficient plant); "managed decline".

3. $\frac{0}{\downarrow}$ Producing the same output with fewer inputs; cost reductions and greater efficiency.

4. $\frac{\uparrow}{0}$ More outputs from the same inputs; "working smarter".

5. $\frac{\updownarrow}{\updownarrow}$ The ideal; maximum increase in the ratio by a combination of the above.

I. Common Misconceptions

1. Increased productivity means layoffs.

2. Increased productivity means working harder.

3. Unions oppose productivity improvement.

4. Increased productivity means higher profits -- not higher wages.

5. Increased productivity comes from new technology.

6. Increased productivity depends upon government action.

7. Increased productivity means lower quality.

8. Productivity of the company can be measured by the financial statements.

9. Productivity means units produced per hour.

10. Productivity of white-collar and knowledge workers cannot be measured.

J. Overcoming resistance to productivity improvement

1. Productivity improvement means something must change.
2. BOHICA - Bend Over, Here It Comes Again
3. WIIFM - What Is In It For Me?
4. Most common questions asked about change:
   a. Why should I change?
   b. What's in it for me?
   c. Will the change process be practical?
5. Probability of change = Need x Benefit x First Step

K. Force Field Analysis Diagram

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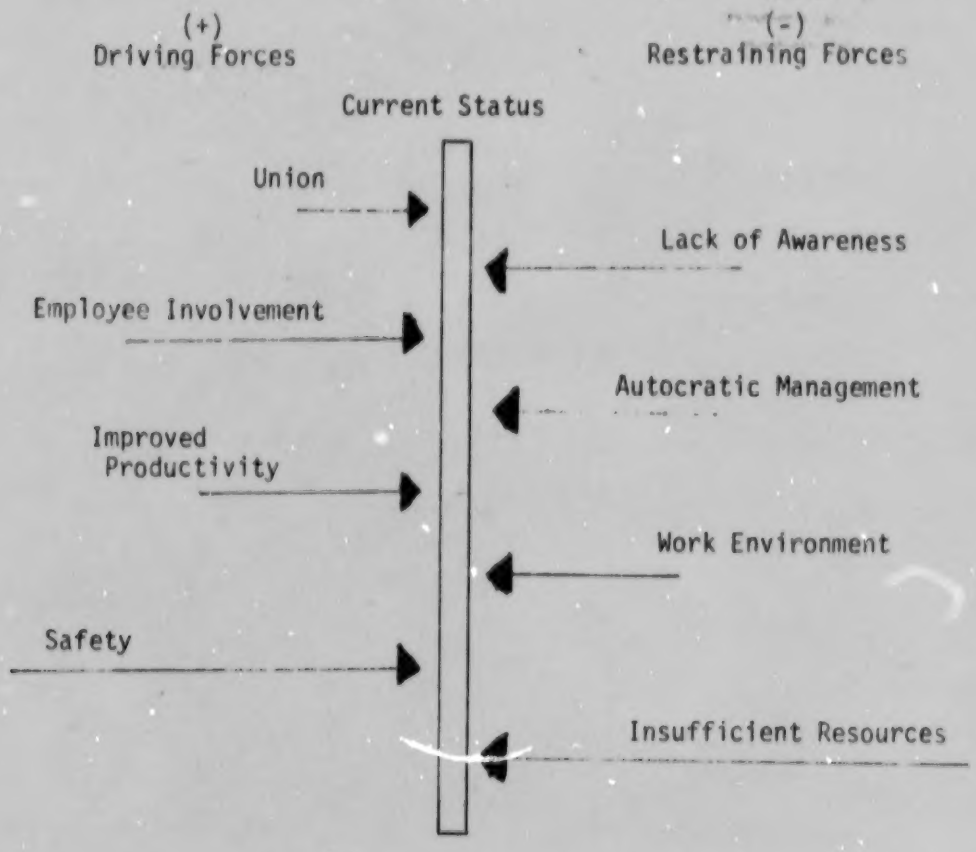


Good framework to organize thinking.
Use to look at possibility of change.

1.6

Subsection 1.2 - Commitment

I. Organizational Commitment

A. Top management

1. Become aware of productivity and quality of work life issues.

2. Insure that the organization understands the importance of productivity improvement.

3. Determine the appropriate priority for productivity emphasis.

4. Participate personally in recognition of accomplishments.

5. Provide climate of continuity for productivity emphasis.

B. Middle Management

1. Become aware of productivity and quality of work life issues.

2. Design and carry out the systems to communicate and support the awareness messages.

C. Foremen/First line Supervisors

1. Become aware of productivity and quality of work life issues.

2. Provide the link between the organization's goals and the people who are producing.

D. Employees

1. Become aware of productivity and quality of work life issues.

2. Communicate upwards

3. Make suggestions

4. Understand the relationship of productivity to job performance.

II. Productivity and Quality of Work Life

A. What is it?

"All people are at their best when they are essential members of an organization that challenges the human spirit, that inspires personal growth and development, that gets things done and that symbolizes only the highest standard of ethical and moral conduct -- that's what quality of work life is all about." Dutch Landon

B. Common factors shaping QWL

1. Knowing we make a difference to the organization
2. Seeing the results so we can take pride in our contribution
3. Contributing to the effectiveness of the organization

C. QWL assumption

1. People want to contribute
2. People are experts on their jobs
3. That expertise should be tapped
4. Better decisions and actions can result

D. Why QWL now

1. Changing work force
2. People control results
3. "Age of Entitlement"
4. "We've tried everything else"

E. The "new work ethic"

1. Value Systems
   a. Changed values -- all in 20 years
      1. Ecology and Earth Days
      2. Civil rights and affirmative action
      3. Age, Vietnam, veterans, handicapped workers
      4. Women's rights, gay rights
   b. Parenting Values and Discipline
   c. Educational Institutions
   d. Television
2. Changing Expectations
   a. Material rewards
   b. Increased educational level
   c. Attitudes toward authority

d. Mutipler-worker families

e. Communications revolution

3. Changing Environment

a. Younger workforce

b. Mistrust of institutions

c. Personal value systems

d. Economic pressures

e. Service economy

f. Social accountability

g. Too much affluence

h. Work ethic decline

i. Slowing achievement drive

j. Loss of incentives

k. New Values

F. How to improve QWL: Involve employees

1. Share information

2. Make them feel like they make a difference

3. Go to them for ideas

III. Employee Involvement

A. What is EI?

1. An "umbrella" term to describe a variety of ways people within organizations can work together to improve productivity and quality of work life

2. It's a management philosophy that involves employees in the decision-making process that affects them

3. It means the effective use of all human resources within organizations -- and that includes all levels

4. It's an ongoing process which encourages both professional and organizational growth

B. Why is it so important now?

1. Inflation and declininig productivity in the U.S. have increased our need to be more competitive with Japan and Europe.

2. EI has contributed greatly to their economic success.

3. Another reason is the changing values of our work force:

   a. Employees want more individual respect and recognition for their effort

   b. Employees are not as motivated by money, security, etc.

   c. Employees are better educated, having "rising expectations"

C. What are the assumptions that make EI work?

1. Employees have unique sources of expertise about their jobs

2. This expertise is not being tapped effectively

3. Employees want and are able to contribute this expertise

4. Employees want to have more input into the decisions that affect them

5. Use of this resource can lead to better decisions

D. What does EI appropriately include?

1. Sharing business and problem information

2. Feedback and responsiveness to employee questions, suggestions, concerns

3. Inter- and intra-departmental cooperation at all levels of the organization

4. Employee influence in decisions that affect them

5. Mutual respect and trust among individuals

6. Recognition for individual and team efforts and accomplishments

E. Who is involved?

1. Appropriate for <u>any</u> organizational function or unit or for the entire company

2. Appropriate at <u>any</u> level -- management and supervisors are employees, too

3. Internal support personnel for data collection, etc.

4. The union

F. What are the potential barriers?

1. Lack of management commitment

2. Inadequate management planning and preparation

3. Lack of resources

4. Insufficient program planning and goal setting

5. Unrealistic or inappropriate objectives and time frame

6. Insufficient union involvement

7. Inattention to maintenance and evaluation of intended and unintended consequences

8. Attitudes which lead to "quick fix" and "shot gun"

9. Inadequate training

G. What does a successful EI effort require?

1. Long term perspective and effort

2. Management and union commitment

a. Attitudes and behavior congruent with goals

b. Willingness to stand behind those involved

c. Adequate resources

1. Budget

2. Time

3. Facilities

4. Staff

d. Systematic evaluation and flexibility for program modification

e. Realistic expectations

1. Success will require extensive efforts

2. Not a short term success story

3. Problems will surface

f. Continual maintenance

H. What are the possible results?

1. Employees provided with a sense of value and accomplishment
2. Greater commitment to organizational goals
3. More congruency between individual and organizational goals
4. Higher levels of quality and productivity
5. Greater responsiveness to problems and their solutions
6. More satisfying working relations and environment

Subsection 1.3 Review internal and external sources of information

I. Internal Sources

A. Employee Handbooks

B. Company Newsletters

C. Brochures

D. Posters

E. Small group meetings

II. External Sources

A. Public seminars/workshops

B. Customized training programs

C. TV and radio spots

D. Speeches and lectures

E. Newspaper and magazine articles

This subsection is designed to make participants aware of the various sources of informations. Participants are asked to share any sources that are used in their organizations. The facilitator will have on file numerous examples of sources of information.

SUPPLEMENTAL MATERIALS

I. Article

1. "What Every CEO Should Know About Productivity"

2. Background Information on Productivity

II. Exercises

1. Test your Productivity/Quality of Work Life Awareness

2. Can You Improve Productivity?

3. Supervisory Employee Questionnaire

4. Recognizing Productivity Problems

5. Some Productivity Questions

III. Case Study - Rohm and Haas

IV. Suggested Films and Audio/Visual Aids

"Productivity and the Self-fulfilling Prophecy: The Pygmalion Effect," McGraw-Hill Films, Del Mar, California 92014 (714) 453-5000

"The Time of Your Life," Calley Curtis, 1111 North Las Palmas Avenue, Hollywood, California 90038 (213) 467-1101

"You Pack Your Own Chute," Ramic Productions, 4910 Birch Street, Newport Beach, California 92660 (714) 833-2444

"Firestone/23/28" J. J. Hennessy, 900 Palm Avenue, South Pasadena, California 91030. (213) 682-2353

"Guardian Life" Guardian Life Insurance, 201 Park Avenue South, New York, New York 10017. (212) 473-3000

"The Promise of Productivity" U.S. Chamber of Commerce, 1615 H. Street, N.W., Washington, D.C. 20062. (202) 659-6183

"Will There Always be an England?" U.S. Chamber of Commerce, 1615 H Street, N.W., Washington, D.C. 20062. (202) 659-6183

"Who Killed the Sale"
"Managerial Revolution"
"Increasing Productivity"
Thompson, Mitchell and Associates, 2969 Grandview Avenue, N.E., Atlanta, Georgia 30305 (404) 233-5435

"Making Human Resources Productive"
"Motivation and Productivity: A Series"
BNA, Communications, Inc., 5615 Fisher Lane, Rockville, Maryland 20582. (202) 452-4500

"What Killed the Bell System," Mr. Fid Crowe, Division Manager, Ohio Bell Telephone Company, 23611 Chagrin Blvd., Room 106, Beachwood, Ohio 44122. (216) 822-7214.

"Genius at Work," Public Affairs Department, Caterpillar Tractor Company, 100 N.E. Adams St., Peoria, Illinois 61629, (309) 675-1000.

"People and Productivity: We Learn from the Japanese," Encyclopedia Britannica Corporation, 425 N. Michigan Avenue, Chicago, Illinois 60611 (312) 321-6800.

"The Case for Productivity," Bureau of Business Practices, 24 Rope Ferry Road, Waterford, Connecticut 06368 (800) 243-0876.

A 'HANDS-ON' APPROACH TO MANAGE PRODUCTIVITY

CEOs must do more than issue edicts and set deadlines. They've got to get involved and stay with it.

About a year ago, the president of a major oil company issued a brief but firm edict reminding his top managers of the importance of productivity and directing them to take appropriate actions. He did not specify the actions. But he did name a deadline. After a few months, they were to report back to him on what actions they had taken and what results they were seeing. This edict was taken very seriously by those who reported to him and few questions were asked. An outside productivity expert called in by one of the company's operating divisions reported: "The people in the division told us, 'We have to have a program in 30 days.' When we said it couldn't be done in 30 days, they were almost frantic. The atmosphere was quite irrational. I don't think they could have cared if we were third-world revolutionaries as long as we would promise something in 30 days." Despite words of caution from their consultants, the company's managers plunged ahead. "We were running in 15 different directions," a divisional manager said later. "We didn't know what we were doing." There was no coordination. No planning. No training. And a good deal of time was wasted at all levels. After a few months, things returned to normal, but the experience left a bad taste. Today when anyone mentions productivity improvement, company executives there tend to wince.

This is not an uncommon story. A frequent response of top executives under pressure to "do something" about productivity is to issue orders and demand reports. But often their orders are not the kind

that are going to get the job done, and the reports they get back too frequently reflect a desire to please rather than any true indication of progress. After a while, the subject drops from view. The CEO is frustrated, loses interest, and moves on to the next "priority." When this happens, word spreads fast. The company's honeymoon with productivity is over. Attempts to achieve a quick "pay off" produce no lasting benefit and ultimately do more harm than good. Whether we like it or not, one of the secrets of success in raising productivity, as in raising children, is patience.

Another step frequently taken by chief executives to launch a company's productivity effort is to call a meeting of the senior staff to discuss the subject and to delegate responsibility. These meetings are often a farce because no one in the room is adequately informed. They don't know their own company's productivity record, or that of their competition or the industry in general. They are completely in the dark about productivity improvement techniques or how they might apply to their company. In other words, unless carefully prepared in advance, such sessions can sometimes add to the CEO's feeling of frustration.

But delegation can be an even faster route to disaster. For any effort to succeed, the company needs to feel the involvement of the chief executive. He is expected to delegate the details to others, of course, but he can't slough off his responsibilities. His interest and involvement must be viewed by all as genuine and indelible, not just a temporary enthusiasm to be catered to. Delegation has other possible traps as well. The staff level and reputation of the person put in charge of the project immediately signals how seriously others are expected to take the matter. In too many cases, responsibility for "productivity

coordination" is placed on the shoulders of a hapless junior executive. The company at this stage may have no plans, structure or special training in mind, and no one has thought to provide the coordinator with either staff or resources. In short, there is no context in which the coordinator can really function effectively. And, even worse, if the person picked for the job has no reputation or clout in the company, he is soon reduced, poor man, to traveling around with a set of slides and trying to sell productivity, most often making little or no impact. A repetition of this scenario is, unfortunately, going on in major corporations everywhere.

At the root of the problem is the widely-held belief that productivity improvement is just another company program, along with the annual savings bond drive or the United Way campaign. This approach immediately places productivity in the wrong frame of reference. Instead, it belongs in the mainstream of the company's day-to-day operations where its direct relationship to company profits and growth is apparent.

One company which has improved productivity in a sensible way is Tenneco, the Houston-based multi-industry company with major interests in energy. CEO James L. Ketelsen began by establishing productivity as the company's long-term goal for the 1980s. In a memo to divisional company presidents and corporate staff heads, Ketelsen stated: "Productivity gains are a consequence of the interplay of many factors work-simultaneously-capital, labor, union-management relations, incentives and, finally, management itself. With productivity gains difficult to attain and equally difficult to maintain, management needs to give this matter constant attention if progress is to be made." He related productivity gains directly to those factors which management

already measures, understands and appreciates as essential. Ketelsen also wisely appointed an experienced executive as the director of productivity programs at the corporate level. In selecting Max E. Zent, already recognized and respected as director of Tenneco's management education program, he relieved the director of the burden of having to sell himself to his colleagues in addition to selling productivity. Zent's initial role was not to produce results, but to assess the techniques already in use and examine alternatives before developing a plan.

Another company taking a practical approach to the problem is Boise Cascade, the diversified forest products company, whose president Jon H. Miller is personally involved in developing the company's approach. He formed a corporate level task force which meets quarterly and then extablished similar task forces for the company's five operating groups to focus on each group's operation. Miller asked one of his senior production executives, Robert K. Stolz, Jr., to spend a year at the American Productivity Center as an associate. In this associate program, company executives, while retaining their seniority, salary and other company benefits, spend a year or more at the Center in a staff role, learning productivity measurement and improvement techniques and doing practical work on pilot projects. When Stolz returned to Boise, he became productivity ombudsman. "We are not trying to impose one method on the whole company," Stolz points out. "We want each group to develop the methods most appropriate for their own operations and industry."

One large diversified manufacturing company tried a different approach. The board voted a large sum for funding "productivity projects," but the company had no plan to make use of these funds. As projects

were proposed they were funded. What happened is that the funds were used largely to continue the kind of productivity projects the company had always conducted but previously paid for from other budgets. The new funds were not being used to stimulate new approaches. Thus no real progress was made. "It looks good on paper, but nothing is really happening" is the way one manager described it. Among the specific failings of its productivity program the company later identified the following:

*The approach was too fragmented. The "projects" were like a series of Band-Aids.

*The human resource executives were not involved.

*No one above the divisional level was involved.

*New techniques were not explored and incentives were not used.

*There was little understanding of the need to present techniques effectively.

*The CEO did not visibly support or encourage the project.

Happily, this company realized what was happening and took action before it was too late. Now with restructuring, solid management commitment and sufficient financing, there are likely to be some exciting results over the next few years.

Another organization trying to solve its productivity problem is Conrail, now the nation's largest railraod with 80,000 employees. Former chief executive Edward G. Jordan believes employees-rather than new technology or rolling stock-represent the best hope for future productivity gains. He sees these gains resulting from better labor-management relations and more employee participation in decisions which affect them. Jordan knows that this is a long-term proposition and its success will

depend on the cooperation of Conrail's 23 labor unions. With so many unions involved, cooperation on all points may be difficult but management thinks it is worth the effort.

More companies are working with union leaders on productivity improvement and quality of worklife projects. General Motors and United Auto Workers have worked together successfully in several plants. One of the most outspoken proponents of increasing industrial productivity, I.W. Abel, the veteran steelworkers' leader, now serves on the board of the Center along with leaders of three other labor organizations. This cooperation may come as a surprise to many top executives, but it shouldn't. Labor leaders are increasingly aware of the threat to American jobs by outdated labor-management practices, whatever their origin.

Recent agreement with the Communications Workers of America, United Steelworkers of America and United Auto Workers encouraged cooperation for the improved operations of a company.

How can a CEO help his company tackle productivity effectively and avoid the pitfalls that others have experienced? Here are some suggestions:

First, the chief executive must be involved. He must convince his senior corporate and divisional managers that productivity gains are a major management goal that must be given high priority.

Second, he needs to ensure that a comprehensive long-term strategy is developed. This plan should do the following:

*Identify opportunities for improvement.

*Establish goals.

*Establish productivity measures.

*Ensure that those who succeed are rewarded otherwise no one will bother.

*Involve all employees. This is one of the secrets of Japan's success. The more employees are involved, the more committed they become.

*Communicate effectively. Initially, employees need to be educated but the flow of information must be continuous.

*Assign specific functions throughout the organization. Include both line and staff personnel.

Third, productivity should be part of the company's regular business plan and budget. The business plan already contains specific goals, provisions for performance reviews and rewards for achievement. It also provides a continuous flow of information. Since the company already knows how to handle these things, by including productivity improvement in the plan a lot of initial indecision and nervousness as to where productivity "fits" is overcome.

Finally, CEOs should realize that gains do not come only from doing harder and better what you have been doing all along. The greatest potential for improvement may lie in doing things differently. That means changes in organization, management style, in the roles of hourly employees and first-line supervisors and in relations with labor unions. This will involve taking risks.

This point was made clear to me recently by a Japanese journalist who prepared a series on our ailing economy. After traveling all over the U.S., he expressed surprise that we have trouble raising our productivity. "You taught us most of what we know," he said. "The only differ-

ence is that you are not applying it. If you did, America would be okay." He has a point. We have the tools, the know-how and the resources to greatly improve efficiency but we are simply not applying them.

Grayson's experience as chief of President Nixon's price control program in 1971-73 convinced him that productivity neglect was a major cause of inflation. To combat this he founded the American Productivity Center, a Houston-based, non-profit organization. Together with Pete Moffett, the Center's executive vice president who contributed to this article, the organization consults with over 100 leading corporations in developing productivity improvement programs.

by C. Jackson Grayson, Chairman
American Productivity Center
Houston, TX

MODULE I - AWARENESS

Background Information on Productivity

The American standard of living has continually advanced since the early years of this country's existence. This advancement has been due largely to the strides made in increasing productivity throughout all sectors of the country's economy. Those advances resulted in vast improvements in the quality of our life at work and at leisure. So strong have the economic advances been, that we have been able to overcome the effects of recessions, depressions, wars, and social revolutions.

Unfortunately, the concept of productivity, even the word itself, is grossly misunderstood by most people. There are many who look upon productivity improvements as a masquerade for increasing production at labor's expense. The simplest definition of productivity is the ratio of output to input. Dr. C. Jackson Grayson, Chairman of the American Productivity Center, defines productivity in simple terms:

> "A process of getting more out of what you put in. It's doing better with what you have."

This definition keys on the fact that productivity is a concept which encompasses and benefits from participation of the entire organization. Furthermore, it recognizes that some form of process must act upon inputs in order to generate the system's outputs.

Although the quality of work life concept is not included in the definition, it is difficult to separate QWL and productivity into a cause/effect relationship similar to the "chicken and the egg" paradox. This

entwined relationship can best be exemplified by paraphrasing the General Motors Quality of Work Life philosophy as presented in their new employee handbook:

> Working should provide the opportunity for making full use of your knowledge and abilities. It should provide the opportunity to increase responsibilities and rewards and facilitate realizing high levels of personal satisfaction of your accomplishments. The work environment that provides these ingredients is in the best interest of both the employee and the employer.

In reducing this definition to practice, a number of factors that contribute to improved quality of work life must be considered:

1. Involve the worker in the decision-making process as it relates to his job function and his impact on product quality.
2. Provide a channel for two-way communication of problems, concerns, and suggestions.
3. Recognize the individuals' importance to the success of the enterprise.
4. Recognize that no one knows the job better than the person doing it.
5. Provide a means for individuals to improve their job performance and receive appropriate recognition.

Interest in productivity is a direct result of the seriousness of the productivity growth slowdown in the U.S. during the past fifteen years and the impact this slowdown has made upon our national economy. The results are rampant inflation and interest rates at levels previously unheard of in the United States and a sharp decline in the pace of capital investment for normal technological improvement. We have lost previously secure markets for manufactured goods, with resulting unemployment, an increasing number of closed-down factories and a reduced standard of living.

The national productivity slowdown has been accelerating rapidly during the past five years, with a decline in growth rate superseded by an absolute drop in labor productivity for the private business economy in the last three calendar years.

While the U.S. economy has been suffering this severe decline in productivity growth, other major industrialized nations have been more successful in achieving and retaining strong growth, despite the 1974-75 recession and other maleficent impacts of the energy crisis since 1973. Japan, France, West Germany, Italy, and Belgium have demonstrated particularly strong productivity growth, and this has shown up directly in their enlarged portions of the international market for manufactured goods. Manufacturing labor productivity growth rates for these nations during the past two decades or more have doubled or even tripled the pace of the U.S. and the United Kingdom and (more recently) Canada.

| | Average Annual Productivity Growth Rates (% per year) | | | | | |
|---|---|---|---|---|---|---|
| | 60-73 | 73-78 | 78-81 | 50-67 | 67-73 | 73-79 |
| | Real GDP per Hour Worked | | | Output per Hour, Manufacturing | | |
| U.S. | 2.6 | 1.4 | -0.3 | 2.5 | 3.6 | 1.5 |
| U.K. | 3.7 | 2.5 | 0.5 | 2.8 | 4.3 | 0.5 |
| Canada | 3.0 | 1.3 | -1.3 | 4.0 | 5.1 | 2.2 |
| Italy | 6.9 | 4.2 | 2.0 | 6.4 | 7.2 | 3.7 |
| Belgium | 5.4 | 4.2 | 1.5 | 5.2[1] | 9.0 | 6.0 |
| France | 5.6 | 3.8 | 2.7 | 5.0 | 6.1 | 4.8 |
| W. Germany | 5.4 | 4.3 | 2.4 | 6.0 | 5.3 | 5.3 |
| Japan | 9.8 | 4.0 | 3.7 | 9.5 | 11.0 | 6.9 |

1/ 60-67 only

Average Annual Total Factor Productivity Growth Rate

| | Total Private Business | | Manufacturing Sector | |
|---|---|---|---|---|
| | 1960-73 | 1973-78 | 1960-73 | 1973-78 |
| U.S. | 3.1 | 1.4 | 2.9 | 2.2 |
| U.K. | 3.8 | 2.0 | 4.1 | 0.6 |
| Canada | 4.2 | 1.5 | 4.5 | 2.8 |
| Italy | 7.8 | 0.9 | 6.9 | 3.3 |
| France | 5.9 | 4.0 | 6.0 | 5.1 |
| W. Germany | 5.8 | 4.2 | 5.5 | 5.0 |
| Japan | 9.9 | 3.6 | 10.3 | 4.2 |

As a result, the once-huge U.S. leadership in national productivity levels has shrunk rapidly. At the close of World War II, U.S. real gross domestic output per hour was virtually doubled that of any other major industrial power except Canada. By 1979, no less than nine nations had risen to four-fifths or more of the U.S. absolute productivity level.

According to recent projections, based on the best data available as of May 1981, France, Germany, and Belgium will overtake the U.S. level of real GDP per hour in 1985, 1987, and 1988, respectively. (Though Japan and Italy are recording rapid national labor productivity growth rates, their relative levels in the earlier postwar years were so low that it will be many years before these nations can overtake the U.S. in output per hour, at presently projected rates.)

Causes of U.S. Productivity Decline and Increasing Divergence in Productivity Trends, U.S. and Other Leading Industrial Nations:

There are almost as many opinions on the above two topics as there are economic analysts. However, especially during the past year and a half, some concensus has emerged as to the most important of the major influences.

Among the factors clearly established to be of outstanding importance are:

1. Industrial Investment: An increasing volume of evidence has accumulated demonstrating the close correlation between industrial investment (for plant, machinery, equipment, new products, and new methods) and productivity growth. The most recent and most definitive of the available studies, recently completed by John Kendrick, relates data on both levels of investment to gross domestic product and growth rates of the investment/GDP ratio to total factor productivity growth for eight major industrial nations, for the span 1960-73 and 1973-78. Correlation analyses completed by Dr. Kendrick with these figures show an extremely high positive coefficient. Obviously, Japan, West Germany and France blaze the leadership trail on both aspects of the analysis.

2. Declining Concentration on Research and Development: Though the specific correlations are more difficult to trace, and there is an acknowledged time lag between expenditure and achieved productivity growth, virtually all economic analysts now agree that "adequate" amounts of basic and applied research, development and effective dissemination of the results are among the major determinants of growth in productivity and in total output. For the U.S., research and development peaked as a percentage of gross national product (in "real" or constant dollar terms) in the mid-sixties; and slackened rapidly after the termination of the Apollo space program and the Vietnam war-induced defense-related research. In percentage terms, U.S. R&D as a percent of GNP declined one-fourth between the mid-sixties and 1978-79.

In the international context, the U.S. (the world's leader in science/technology/innovation in earlier years) has fallen rapidly behind the growth rates in the R&D-to-GNP ratio during the past fifteen years, far behind Russia to a level roughly on a par with West Germany and not far above the ratio levels of Japan and France.

A significant aspect of the R&D international picture is that a major percentage of U.S. R&D has been for space and defense rather than for civilian objectives. When a comparison is made on the ratio of civilian R&D to GNP, the U.S. has been sharply below the rate for West Germany and for Japan and even below the U.K. ratio for certain years during the 1967-76 span for which data are available.

3. Increasing Government intervention in the economy: The first states of the U.S. productivity slowdown were directly traceable to:

Expanded U.S. Government regulation of industry, including action directed to worker health and safety, environmental improvement, and expanded "cradle to the grave" security programs, involving large "transfer payments," an increasing Government budget and direct competition with industry for available capital. The results:

* Substantial increases in the rate of inflation and decline in the real value of the dollar.
* Diversion of both management attention and available investment capital from productivity improving innovation and improved plant/equipment, to conformance to frequently ill-conceived regulations;
* Creation of a pervading atmosphere of uncertainty, among managers, entrepreneurs, and investors, which further curtailed normal sources of funding for improved plant and equipment.

* As a direct result, a drop in average productivity growth of the private domestic economy during the span 1965-73 to a level a full third below the earlier two postwar decades.

4. The OPEC "oil shock" and the energy crisis of the 1970's: The 1973 OPEC oil shock, superimposed upon an already unstable economic situation in the U.S. and other industrialized nations, led directly and immediately to a worldwide recession. The oil embargo of October 1973 and subsequent quantum leaps in petroleum prices forced a revolution in long-accepted approaches to production, always based on cheap energy, with strong and continuing demand and at least relative price stability.

The problems were further aggravated by the "second oil price shock" of 1979-80, which forced the worldwide 1980-81 recession on a world barely recovering from the earlier energy impact. As a direct result, U.S. inflation, which had roughly doubled in 73-77, leaped to double-digit levels in 1978, 1979 and 1980. Interest rates soared to levels previously unheard of in the United States, peaking over 20%, prime rate. Production and productivity were directly impacted. The post-1973 recession forced a slow-down of productivity growth to just over 1% per year during 1973-77. This "slowdown" was succeeded, in turn, by an actual decline in labor productivity for the U.S. business economy for three successive years: 1978, 1979, and 1980, the first time in history this has ever occurred.

Among the specific ways in which the energy supply/cost problems adversely affected labor productivity (as itemized in a Congressional Budget Office staff study) are:

* Caused business to substitute labor for more expensive energy;

* Outmoded that portion of industry's capital stock which was not energy efficient;
* Shifted the focus of investment and innovation toward energy efficiency rather than labor efficiency;
* Produced chronic inflationary pressures that call for restrictive monetary and fiscal policies; thus
* Added to uncertainty about future economic conditions;
* Reduced growth in real income, stimulating labor force growth;
* Depressed the demand for goods and services generally.

As pointed out in the Congressional Budget Office study and in many other writings, the energy crisis has exerted a severe adverse impact upon productivity growth, which cannot be measured satisfactorily by conventional growth-analysis models. Some econometricians, including Jorgensen, attritube at least 0.7 percentage points of the productivity slowdown to this problem, taking into account both direct and indirect effects. (Since the decline in average annual labor productivity growth rate between 1965-73 and 1973-78 totaled 1.4 percentage points, the energy contribution may thus be assumed to account for a full half of the slowdown).

It is inescapably clear that the century-long tradeoff of energy intensive but high productivity capital for labor input has been reversed. Managers have been forced to turn to the use of more employees, more man-hours and less energy consuming machinery. The extent of this trade-off (which was questioned until very recently by some economists) is not showing up clearly in the statistical series.

Clear evidence appears in:

* the sharp slowdown in growth rate of capital stock per hour in the post-OPEC years;

* the even sharper increase in employment per capita and in aggregate hours input during the same span; and
* a significant reduction in BTU's of energy input per dollar of real GNP, reflecting the reduction in energy useage.

5. Other factors: There were significant factors other than differential rates of national savings and investment of capital for the industrial plant which contributed to the increasing divergence in productivity growth rates of the U.S., the U.K. and Canada (on the one hand) and Japan and the leading Continental European nations (on the other). Included in such factors were:

* Massive postwar transfer from the U.S. to Japan and Western Europe of the best of both management and technology then extant;
* Economic assistance in the rebuilding of wardevastated industrial plant;
* A national dedication to improvement, rebuilding of industry, and expansion of export markets, especially in the cases of Japan, Germany, France, Italy, Belgium, and certain smaller Asian nations;
* A degree of forward planning and collaboration between industry, labor, Government, and the academic community which assured rapid improvement of productivity; and
* In the post-OPEC period, as compared to U.S. experience, more effective action by the Governments of Japan, Germany and Franch -- especially -- in coping with the energy crunch, in terms of both supply curtailment and quantitative leaps in prices. As a result, recessions have tended to be less severe; both unemployment and inflation were controlled more effectively (not so in France, nor in Italy, however).

* Continuing focus on acceleration of innovation and on expanding international market share.

* As a by-product of more substantial savings and investment of capital for industry, average age of plant and equipment in Germany and Japan -- perhaps also in France -- has declined to levels ranging downwards to less than half that of the United States.

SPECIAL NOTE: The specious "employment shifts" item has been for some time a misleading item in analyses of causes of U.S. productivity decline; and is thoroughly blasted by recent data on actual levels of labor productivity (real output per hour) for the individual sectors of the economy, and for the combinations of goods-producing versus services-producing industries. Certainly, the ratio of both employment and hours worked has shifted from the goods-producing to services-producing sectors. HOWEVER, actual weighted average levels of productivity are higher for the services producing group than for the goods-producing sectors. Growth-rate in labor productivity for the services industries has been slower than for the goods-producing sectors, 1948-80 (1.9% per year vs. 2.9% per year for the goods industries). In terms of actual levels of real output per hour, however, the following is revealing:

| | 1948 (real $ per hour, | 1979 all persons) . |
|---|---|---|
| Weighted average, goods industries | $2.93 | $7.37 |
| Weighted average, services sectors | 4.12 | 7.57 |

6. Energy Crisis Impact: The unprecedented increases in the cost of energy following the Arab oil boycott of 1973-1974 has had a substantial negative impact on the productivity growth in the United States. One result of these energy cost increases would be to shift investment

toward more labor-intensive rather than energy-intensive processes. Berndt and Jorgensen, in the October 1978, Spectrum productivity issue of the Institute of Electrical and Electronics Engineers stated "Since energy and labor are substitutes, energy price rises imply a tendency to increase labor input to obtain a given output. This implies further, at least, a reduction in the rate of increase of labor productivity." This potential toward realigning emphasis more toward manual labor in lieu of increased energy requirements, slows up the long-term trend to mechanization and leads to productivity growth declines.

7. Worker Attitudes: A recent survey of company presidents conducted by the Gallagher President's Report, Inc. revealed that in addition to government regulations and inadequate incentives for capital investment, they identified the major causes for U.S. productivity decline to include union work rules, worker job indifference and deterioration in labor quality. The management group is obviously subjective. Undoubtedly these factors were further enhanced by management's inattention to productivity, the changing attitudes of the work force, and the need to adjust and improve management techniques.

## TEST YOUR PRODUCTIVITY/QUALITY OF WORK LIFE AWARENESS

1. What is productivity improvement?

   A. Producing quality goods and services
   B. Increasing profits from production
   C. Getting more outputs for your inputs
   D. Reducing the Consumer Price Index
   E. Using more machines and fewer people

2. What is the relationship between productivity and quality of work life?

   A. Productivity can affect quality of work life
   B. Quality of work life can affect productivity
   C. Improved productivity can have an adverse effect on quality of work life
   D. Poor quality of work life can have an adverse effect on productivity
   E. All of the above

3. The most productive nation today (domestic output per employee hour) among the world's major industrial powers is:

   A. France
   B. Japan
   C. United Kingdom
   D. West Germany
   E. United States

4. Which of the following countries has had the lowest productivity growth rate (% of growth) over the past decade?

   A. Canada
   B. United States
   C. Italy
   D. United Kingdom
   E. France

5. The recent slowdown in the U.S. productivity growth rate is attributed to:

   A. Declining R&D expenditures
   B. Government regulations
   C. Reduced investment
   D. Work disincentives
   E. All of the above

6. The estimated percentage of workers in service or service-related jobs by the mid-1980's is:

   A. 40%
   B. 50%
   C. 60%
   D. 70%
   E. 80%

7. In a National Commission on Productivity survey, a majority of people agreed with all of the following statements except:

   A. Higher productivity means higher company profits
   B. Companies benefit from improved productivity at the expense of workers
   C. Increased productivity means higher pay to workers
   D. To increase productivity, people have to work much harder
   E. Increased productivity equals higher unemployment

8. What benefit(s) can your organization derive from improving its productivity and quality of work life?

   A. Increased profits
   B. Improved competitive position
   C. Improved employee satisfaction
   D. Growth
   E. All of the above

Answers

| | |
|---|---|
| 1 - C | 5 - E |
| 2 - E | 6 - E |
| 3 - E | 7 - C |
| 4 - B | 8 - E |

## CAN YOU IMPROVE PRODUCTIVITY?

Try to take this quiz before reading the related article on productivity. It's a simple quiz that will suggest guidelines for improving productivity.

Answer "yes" if you feel the advice would improve worker efficiency and "no" if you think it would have little or no effect.

_____ (1) To help prevent accidents in a plant, each worker is given a $25 bonus at the end of the year if the total number of accidents is below given percentage.

_____ (2) Each employee is given a realistic target goal for increasing productivity. Profit sharing is paid each month to those who meet the goal.

_____ (3) Employees are given their choice of working hours within specialized limits, through introduction of flextime.

_____ (4) Based on an individual worker's measured output for the week, he or she gets a choice of working hours, also within set limits.

_____ (5) A salary increase of five percent is given across the board.

_____ (6) Each worker who was neither absent nor tardy for the month gets a chance at a monthly lottery which pays off with $25 bonds.

Answers:

(1) NO. There is an "if-then" contingency factor here, but it is not strong because each worker gets the reward only once a year.

(2) YES. This is a good contingency based on individual performance with 12 reinforcements each year.

(3) NO. This is not provided on an "if-then" basis.

(4) YES. This is quite effective because it is frequent (weekly) and is provided only when performance improves or is maintained.

(5) NO. There is no "if-then" contingency.

(6) YES. The individual has to do something (show up on time each day) to earn the chance at the bond.

## WHY PRODUCTIVITY REMAINS SO LOW

Many people are puzzled as to why productivity remains so low despite improved wages and ever more liberal benefits.

Managers blame the employees. People, they say, just don't want to work anymore.

Not so, claims Edward J. Feeney, a Redding, Conn., productivity consultant.

He says that productivity is low because management has taken the incentive out of doing a good job. "Wages and benefits," he argues, "are not being provided on an 'if-then' relationship." "Everyone gets them regardless of performance."

Feeney says the "if-then" relationship is the key to productivity: If you do <u>this</u>, then <u>that</u> will happen.

The thing the individual wants, the reinforcement---a reward, a benefit, an activity or event---should always be given contingent on performance. And it should be withheld if that performance does not meet established standards. Also, it should be based on individual performance, not on that of a group, unless it is impossible to separate out one person's performance.

SUPERVISORS

EMPLOYEE QUESTIONNAIRE

1. What are the major problems you have encountered on your job?

2. How capable and reliable are the people who work under your supervision?

3. Why do you work?

4. What do you hope to be doing five years from now?

5. What was net profit last year as a percent of sales?
   a) Less than 2%
   b) 2-5%
   c) 5-10%
   d) 10-20%
   e) Over 20%

6. Why is it important for your company to make a profit?

7. Are you obligated to help make a profit?
   (Answer Yes or No)

8. Explain why you answered Question 7 the way you did.

9. If Net profit increases, how are you likely to benefit?

10. What is the greatest area of waste that you see in your company?

11. How could this waste be decreased?

12. If you do really good work, how do you expect that good work to be recognized?

13. If your subordinates do extra good work, how do you recognize them?

14. How can you help most in keeping the morale of your work group high?

## RECOGNIZING PRODUCTIVITY PROBLEMS

1. Over (under) staffed organization.
2. Company is not people oriented.
3. The management/leadership of the company is not respected by the employees.
4. There is no esprit de corps in the company. There is not a common theme or cause which seems to draw everybody together.
5. Workers feel their employers benefit from increased productivity at the expense of the workers.
6. Some employees feel that hard work no longer pays off.
7. The company's background of employee and labor relations is such that an attempt to organize a productivity improvement program would be viewed negatively by the employees.
8. The company has a fairly low standing on "hygiene" factors.
9. The workforce is predominantly older, generally undereducated, and possesses a less than desirable level of technical skills.
10. Companies get so "hung up" trying to define and measure productivity that they never get around to doing anything about the improvements.
11. Productivity improvement is viewed as "speed up, work harder, work faster, lay off people, job insecurity, etc."
12. Administration or coordination of the program is improperly located in the organization.
13. The productivity coordinator does not have the genuine backing and support of top management.
14. People don't have time to work on productivity improvement because of the demands of their primary job.
15. There is an emphasis on productivity within the organization, but no tie to employee self-interest.
16. People influenced by the productivity program:
    - o Do not understand its purpose
    - o Do not agree with its aim

- Cannot influence it
- Do not receive timely feedback on its progress
- Do not feel they belong to the organization

17. Some people believe their jobs are not subject to productivity measurement because they are supervisors, or they feel that their job is too "creative" to measure.

## SOME PRODUCTIVITY QUESTIONS -- POINTS TO HELP YOU GET STARTED

1. Things seem to be going fine in my company. How do I know whether or not I have a productivity problem?

2. How can I be sure that productivity improvements made in one department are not counterproductive to the efforts of other departments or the company as a whole?

3. How do I keep my productivity program from being perceived as just another "Corporate" program?

4. How should our productivity program be structured to be most effective?

5. Who should be in charge of productivity improvement?

6. How do I find out how other companies tackle productivity improvement?

7. What are other companies like mine doing to improve productivity?

8. How can I be sure that a productivity program is right for us?

9. How do you instill a positive attitude towards productivity improvement throughout the entire organization?

10. How do you handle productivity communications?

11. How do we get our top management involved in a productivity improvement program?

12. How precise should our productivity measures be?

13. What are the 10 most important points I should consider in organizing a productivity program?

14. How do we get the employees involved in our productivity improvement program?

15. How do you get the commitment and support of the first line supervisors and foremen?

16. What do first line supervisors and foremen need to know so they can effectively communicate with their employees?

17. How can I spot productivity problems early so that action can be taken before it's too late?

18. How do I convince management that we ought to have a productivity improvement program when business is so good?

19. What are the problems and pitfalls other companies have experienced in starting a productivity improvement program?

20. How should organized labor and management work together when starting a productivity program?

21. How do we coordinate productivity communications with other line and staff efforts to change work habits and attitudes of not only the employees, but managers and staffers as well?

22. What's the minimum acceptable productivity rate for a division? department? employee?

23. How should productivity improvement be woven into annual planning?

## QWL/PRODUCTIVITY RELATIONSHIP: A GRASS ROOTS EXPERIENCE

Early in 1980, Rohm and Haas finalized a decision to build a new specialty chemical plant on a 60 acre site in LaPorte, Texas which is about 30 miles east of Houston. I accepted the assignment as Plant Manager of Rohm and Haas Bayport Inc.

Early discussions with my supervisor led to the agreement that we wanted an operating system in which individual responsibility was going to be encouraged. This was central to our thinking and indeed was based on a variety of personal experiences in operations.

The model that guided my early thinking on individual responsibility and initiative was the experience I personally gained as an operating manager during a six months strike several years ago at another facility. During that time, we trained a number of inexperienced salaried employees, from mailboys to chemical engineers to be chemical plant operators. I have always felt that those particular six months were a study in how people could positively affect the operation of a chemical plant provided they received the necessary support to get the job done. I subsequently found that this model was a good deal different from what we later experienced at Bayport. However, it provided a starting point for me.

Further discussions with other management personnel in our Corporate Headquarters led us to a decision to hire a consultant to help us design a QWL oriented participative system for Bayport. We interviewed several candidates for the assignment and actually selected two consultants. Mike Sonduck was

selected as our design consultant and Norman Paris as our operations consultant.

We began with the basic premise that the business and people outcomes for the Bayport Plant would be congruent. In order to proceed, it was necessary to prepare outcome statements for the plant. The statements should accurately reflect the way we would conduct our business and make decisions. The statements form the basis for establishing the culture of the plant by which the designs are then fixed. This is represented by the 3 box model shown on the screen. The outcome statements are the finished product and thus must be completed prior to establishing the culture and design itself.

The process that you go through to prepare outcome statements is lengthy and tedious involving a great number of people. Our statements were based upon interviewing a number of people in our Engineering Division and Business Teams. This was done in preparation for a meeting of some twenty-five people in September of 1980 in Philadelphia. The meeting included representatives from North American Region Personnel, Business Teams, Central Engineering, as well as the Bayport Staff. Individual opinions were given about the Bayport Plant outcomes. As you can imagine, there were many diverse opinions about what ought to be achieved in operating the Bayport Plant. A great many notes were taken and these were ultimately distilled into the outcome statements.

Each statement is followed by a descriptive paragraph. These statements and their definitions were established by the Bayport Staff in December of 1980. They were then reviewed by all the meeting participants as well as other interested managers. The final form of the statements is attached.

The next step in our work was writing the description of the culture we wished to establish at Bayport. This was rather easily accomplished as it followed from our outcome statements. These are the culture phrases that were selected.

The next phase was the critical one of design. We established that several factors must be considered in our design. Some of the important criteria were multi-skilled technicians, pay for knowledge, no third party representation, self-managing teams (no shift foremen), open communication and minimum management structure.

Translation of our outcome statements, culture and design criteria into actual practice began with agreement on the need for careful selection of plant technicians. We knew that our system would require people different from the usual plant employee to be able to work in a non-traditional type of plant. We designed a new application form and prepared newspaper advertising. After much discussion, we agreed to use the Texas Employment Commission to help us screen applicants. They tested all applicants for mathematical knowledge, English comprehension and spatial relations. We interviewed only those candidates who scored above average on the TEC tests.

With the help of Corporate personnel, we decided to utilize a concept called Targeted Selection to enable us to hire the kind of person we desired as a Plant Technician. This concept starts with the determination of what kind of personal attributes "successful people" exhibit in similar types of jobs. These are the dimensions that we chose from the several different kinds of attributes that we originally listed. We then prepared definitions of the

dimensions in order to agree on what constituted success or failure. The definitions were tailored to our outcomes and culture. A copy of these dimensions along with their definitions is attached.

A specific format and structure was developed for the interviews and specific questions were asked of each applicant. All of this was done to assess previous job/school behavior of the applicants in order to judge future tendencies. The staff spent two full days training for the interviewing of the candidates. Each candidate was interviewed by two staff members who asked specific questions relating to the dimensions. The staff members then integrated the results and arrived at an overall rating of the candidates. In all, we received over five hundred applications, tested over four hundred people at Texas Employment Commission, interviewed one hundred fifty-five candidates and selected fifty-two for consideration. We then ranked the selected fifty-two. From this ranking we offered jobs to the top sixteen candidates (actually twenty because four did not accept our job offer). Incidentally, we met all of our EEO requirements.

Technicians began work on September 2, 1981. Since previous plant experience was not a hiring criteria and only one of the sixteen hired actually had previous experience, we had arranged for training to begin at the outset. Two teams were formed. One team spent the week in operational training on the site beginning with packaging operations and utilities training. The other team spent the week in laboratory analytical training followed by classroom lecture at a local junior college. The teams then switched assignments the following week. In all, each technician received 240 hours of classroom and laboratory training and 240 hours of operational training. In addition, each

technician received two days each of first aid and fire fighting training. With imput from the technicians, we later decided that much of the lecture training off site was of little value and it would be necessary to prepare our own training material. It was also clear that the material needed to be learner based so that individuals could proceed at their own pace. We are continuing to work on this program utilizing TV tapes we have prepared our selves as well as purchased slides, tapes and instructional booklets.

The technicians spent the last part of 1981 on shift and in startup of the plant utilities. Early in January, 1982, we began startup of our Specialty Monomer plant followed by startup of our Blazer herbicide plant beginning in April. Both of these plants continued startup activities for the better part of 1982 and have achieved full production in 1983. The rest of this discussion is devoted to several areas of concern about the success and failures in the Management system we experienced during startup.

One of the important design criteria we had was the use of multi-skill technicians in our system. The obvious objective in using multi-skill personnel was to minimize the number of operating personnel and at the same time offer challenging work to the technicians. It also formed the basis for the pay for skills system which I will discuss later. The multi-skill concept we had for Bayport included both the laboratory analytical requirements and material handling, as well as control room, rack and utilities assignments. The experience gained in all of the assignments helped develop an appreciation for all the functions as well as supporting the "operating team" concept. Our success with this concept has generally been favorable but we did not recognize the impact that the length of the rotating cycle had upon the

learning of the technicians. Weekly rotation among the several assignments was practiced for much of 1982 but was lengthened to approximately one month's rotation later in the year to improve the learning. Some technicians were originally opposed to the change to one month but comments were favorable following experience with the lengthened cycle. Additional cycle modifications may yet be necessary, but the general notion of multi-skill is certainly looked upon with favor by the technician group and is part of our culture.

The pay for knowledge system was in concert with the multi-skill notion. We deliberately did not set up any detail beyond the basic concept you see. Early in 1982, a team of three technicians and three supervisors was formed to write out the details of the system to be followed. Many meetings were held and much discussion took place. Consensus was finally reached about how the first raise was to be awarded. It included both peer and supervisor evaluation as well as written testing and on-the-job demonstrations. Technicians were rated and raises were based on final summary of all ratings and test results. Of the sixteen technicians, three did not receive raises and had to be re-tested within an 8-week period. Each of the three subsequently passed and received minimum raises. The system has been modified from the original evaluation and technician response has been mixed. More work has been done by a task force recently formed to enhance the system based on our experience. Current thinking revolves around more direct feedback more frequently so that formal evaluations are not a surprise.

The selection of the original sixteen technicians was described in detail earlier. Despite the work that was done, there was more turnover experienced

in the two years than expected. We lost eight technicians, seven of which were failures from a selection standpoint. We have hired eight replacements plus four additional technicians during the period. However, we have incorporated a final evaluation by the technicians of candidates that have been screened by supervision. Final selection is made by the technicians. We believe this has improved our ability to select the proper type of employee for our system. Only one of the last ten selected has failed to perform.

The Targeted Selection concept has such a favorable impact that it was used to select staff openings in the plant beginning in the latter part of 1981. Many of the same dimensions were used with questions modified as needed to obtain necessary behavior information. The selection process was modified so that the hiring manager was responsible to assess the "technical" capability of the candidates and the interviewers (potentially peers and subordinates) assessed the "dimensional" quality of the candidate. The hiring manager then makes a hiring decision with the "advice and consent" of the interviewers.

It is our intention to operate the plant without shift supervision of any kind. One of our early mistakes was to follow this objective so seriously that we did not have enough experienced operating personnel on the site to cope with the myriad of equipment and process problems encountered in the startup. This hindered the development of the technicians and caused other hardships. We rectified this during the year by temporarily hiring experienced startup personnel and supplying experienced Rohm and Haas employees to help solve the startup difficulties.

We still intend to operate the plant without shift supervision. To that end,

we are working on ircorporating the various functions of the front line supervisor into the technicians work so that we now have assigned various coordinator responsibilities on each team. These include maintenance, overtime, shipping/receiving and safety coordinators.

We spend a good deal of time in open communication efforts at Bayport. This involves regular meetings of the various teams (shift, technical and management). Shift turnovers are important to any operation and turnovers on day shift involve technicians as well as other supervisory and management personnel. We continue to learn how to behave in a participative system under the guidance of Dr. Paris, our consultant.

We have recently restructured our supervisory and management group into a new organization reflecting an effort to develop a team philosophy in our supervisory group. Our efforts are geared toward the focused factory concept as has been expounded by Wickham Skinner of the Harvard Business School. We work on role identification for each member of the Technical Team to provide for proper support of the Technician Team, but this has proceeded slowly due to the technical demands on the individuals.

The one thing I can say for certain is that the system is dynamic. Change continues to occur, but we believe it is healthy for the system and it is for the benefit of the employees and the Company. There is no doubt that the employees of this facility are motivated to reach the objectives as defined by the outcome statements.

## ROHM AND HAAS BAYPORT INC. IS:

### A PEOPLE ORIENTED PLANT

We are intimately involved in the operation of our plant to produce quality products in a safe and efficient manner. We derive satisfaction from and have security in our jobs. We are a highly motivated and committed team that participates in decision making and problem solving. We are well informed by maintaining an open communication system in which innovative thinking is encouraged in meeting our goals.

### A CUSTOMER ORIENTED PLANT

We care about our customers and are responsive to their needs by working closely with business teams. We make timely shipments of quality products which meet performance claims. Business interruptions are minimized by conscientious people and preventive maintenance programs.

### A COST EFFECTIVE PLANT

We are an efficient, competitive plant where objectives are met or exceeded. By eliminating errors, we minimize costs and satisfy budget guidelines. We maintain a safe environment, high quality performance and a stable work force.

### A CONCERNED CORPORATE CITIZEN

We are a good neighbor by actively supporting community needs and maintaining the physical environment. We are involved in achieving government goals. We support local art, science and charity programs as representatives of the Rohm and Haas Company.

### A MULTI-SKILL PLANT

We use our abilities to the fullest extent and we receive training to acquire various skills. This training is a necessity to meet our commitment to perform a variety of assignments.

### AN INTEGRAL PART OF THE ROHM AND HAAS COMPANY

We are responsive to the needs of the company. The company is responsive to our needs. Good interactions are maintained throughout Rohm and Haas by cooperation and meaningful communication.

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# MODULE II

# PLANNING AND ANALYSIS

## MODULE II - PLANNING AND ANALYSIS

### Overview

I. Why planning and analysis?

A. The intention of this phase is to prevent the productivity improvement effort from becoming another "program," or from not really being consistent with the mission, goals, and operating philosophies of the organization

1. An opportunity to incorporate productivity into the philosophy and character of the organization

2. Avoid "false starts" from adopting rather than adapting techniques

B. Productivity planning needs to begin early and proceed carefully

1. Productivity is not a discipline in the business world today

2. Most top managers lack hands-on experience with productivity improvement

3. Often organizations try to attain too much too soon

II. Planning and analysis usually involves top management

1. CEO/COO

2. Executive Committee or Top Management Team

3. Productivity Coordinator

4. Facilitator or consultant

III. Issues to be addressed during the planning and analysis phase

A. How will you define productivity?

B. How does productivity relate to the organization's objectives?

C. To whom in the organization does productivity and quality of work life apply?

D. Is productivity an implicit or explicit managerial responsibility?

E. What is the organization's track record in productivity and quality of work life?

F. How are productivity and quality of work life integrated into your business plan, budget, and performance appraisal system?

G. What are your best leverage points for improvement?

H. What must be done now to provide a long-term perspective?

IV. The outcome of the planning and analysis phase is a sound framework and structure for your improvement efforts

1. Top management commitment that is visibly communicated and demonstrated

2. A written policy or position on productivity and quality of work life that reflects top management's views; the philosophy and character of the company

3. A long-term strategy for productivity improvement

Subsection 2.1 - Define and Relate Productivity to Your Organization

I. Definitions of Productivity

A. "Working Smarter, Not Harder"

B. "Getting More Out of What You Put In"

C. $\frac{\text{Output}}{\text{Input}}$ (Labor, Materials, Capital, Energy)

II. Productivity Measurement

A. Basic Principle

1. Productivity measurement is not an end in itself; it is only useful to the extent it leads to net productivity improvement by increasing awareness, sharpening assessment and focusing attention on action alternatives without adding unreasonable data gathering costs.

B. Why measure?

1. Creates an awareness of productivity levels

2. Indicates where to focus your productivity improvement efforts; an assessment tool to help identify where to take action

3. Provides a non-inflationary analysis of long-term business performance

C. Partial and total productivity measures

1. A "partial" measure is output divided by one input, such as units per hour or tons shipped per square foot of material used.

2. May not reflect "quality" aspect of a product or service.

3. Often seen as a ploy to get people to work harder; requires care in communication.

4. Can become an end in themselves rather than a tool for analyzing operations.

C. Partial and total productivity measures

1. A "partial" measure is output divided by one input, such as units per hour or tons shipped per square foot fo material used.

2. Total productivity measurement is output divided by the sum of all inputs -- labor, materials, capital, and energy.

D. Productivity measurement cautions

1. Easy to misinterpret

2. May not reflect "quality" aspect of a product or service

3. Often seen as a ploy to get people to work harder; requires care in communication

4. Can become an end in themselves rather than a tool for analyzing operations.

E. Partial Measures

1. Labor

a. Employees, employee hours or payroll?

1. Variations in use of overtime?

2. Shifts in responsibility common?

3. Payroll requires deflation.

b. Hours paid, hours at work or hours worked?

c. Tasks contracted out sometimes?

d. Benefits; attached to hours or thrown in overhead?

e. Direct versus indirect, where to draw the line?

f. Examples:

| | | |
|---|---|---|
| Units Produced / Production Employee | Customer Served / Cashier | Tons Shipped / Man Hour |
| Designs Approved / Engineer | Tax Returns / Accountant | Calls Completed / Salesman |
| Value Added / Employee | Sales / Payroll | Pages / Typist |

2. Materials
   a. Some firms call it material yield or material percent loss rather than materials productivity.

   b. Measure materials productivity when:

      1. Materials costs are significant fraction of total costs

      2. Significant trade-offs can be made between materials and other inputs

   c. Includes wide variety of items:

      1. Raw materials consumed

      2. Maintenance materials consumed

      3. Operating supplies consumed

      4. Purchased intermediate good consumed

      5. Purchased services consumed

   d. Only deals with items consumed; inventory buildup is accounted for in the capital inputs

   e. Materials can be grouped into types for deflation purposes

   f. Examples:

| | | |
|---|---|---|
| $\frac{\text{Tons Out}}{\text{Tons In}}$ | $\frac{\text{Value of Shipments}}{\text{Value of Losses}}$ | $\frac{\text{Customers Served}}{\text{Paper Utilized}}$ |
| $\frac{\text{Production}}{\text{Process Scrap}}$ | $\frac{\text{Hamburgers Served}}{\text{Gallons of Ketchup}}$ | $\frac{\text{Photos Accepted}}{\text{Rolls of Film Used}}$ |

3. Capital (Assets)

   a. Capital is a major input to most business; yet measuring the productivity of its use is not common.

   b. Financial reports are incorrectly viewed as adequate measures of capital performance. Financial data is distorted by inflationary economy and management needs better indicators of performance.

   c. Assets to be included:

      1. Physical: land, buildings, machinery and equipment (owned or leased)

2. Working: inventories, accounts receivable, cash

3. Include only what is under control of employees of unit being measured

d. Assets should be included whether leased or owned. To lease or buy is a financial decision independent of productivity considerations

e. To calculate assets consumed, there are two components:

1. Depreciation -- accumulation of funds to replace a depreciating asset

2. Return -- payment for use of corporate treasury money

f. Examples:

$$\frac{\text{Bushels}}{\text{Acre planted}} \qquad \frac{\text{Revenue passenger miles}}{\text{Available seat miles}}$$

$$\frac{\text{Units produced per day}}{\text{Units of inventory}} \qquad \frac{\text{Units produced}}{\text{Machine hour}}$$

$$\frac{\text{Output}}{\text{Space Utilized (sq. ft. or cu. ft.)}}$$

4. Energy

a. Forms of energy

1. Residual fuel oil
2. Natural gas
3. Steam
4. Coal
5. Electricity
6. Bark

b. Examples:

$$\frac{\text{Tons Processed}}{\text{BTUs Used}} \qquad \frac{\text{Degree-Days of Heat}}{\text{Gallons of Oil}}$$

$$\frac{\text{Value Added}}{\text{Energy Cost}} \qquad \frac{\text{Ingots Made}}{\text{KWH}}$$

Subsection 2.2 - Review Productivity Track Record and Identify Leverage Points

I. Measuring Productivity in your Firm

A. Determine level of analysis

1. Corporate/Division
2. Plant
3. Operating Unit
4. Staff group

B. Key factors

1. Labor
2. Materials
3. Energy
4. Capital

C. Determine amount of participation

1. Handed down from top management
2. Negotiated with those being measured
3. Developed by those being measured

D. Use available data

1. Formal financial reports
2. "Informal" records
3. MBO's
4. Engineered Standards
5. Industry data

II. Identify Leverage Points

A. Key personnel and/or groups

B. Channels of communication

C. Productivity factors

Subsection 2.3 - Establish a Common Framework for Management

I. Management Styles

A. Theory X (Authoritarian) Assumptions

1. People dislike work and will avoid it if possible

2. Workers must be coerced, controlled, directed or threatened to achieve effort and organizational objectives

3. The average human being prefers direction, avoids responsibility, has little ambition and wants security

4. Most people have little capacity for creativity in solving organizational problems

5. Motivation occurs only at the physiological and safety levels

B. Theory Y (Paternalistic) Assumptions

1. Expenditure of effort is as natural as play or rest

2. Workers will exercise self-control and direction toward objectives to which they are committed; commitment is a function of rewards associated with achievement

3. Average human beings learn to accept and seek responsibility

4. Capacity for imagination, ingenuity creativity and problem-solving are widely distributed in the population

5. In modern industrial life, human potentialities are only partially utilized.

C. Theory Z (Participative ) Assumptions

1. Long-term employment is expected by both managers and employees.

2. Employees need freedom and the opportunity to "grow."

3. Decisions should be group decisions involving workers and managers.

4. Subordinates are whole people (asopposed to being thought of as titles or as units of production.)

5. Management has a broad concern for subordinate welfare.

6. Open communication, both vertically and horizontally, is the norm.

7. There is complete trust among groups and individuals because they all have the same goals ---the good of the organization.

8. Cooperation, not competition, is the basis for relationships within the company.

II. Management Responsibility

A. How the effort is organized

B. How goals and objectives are established and communicated

C. Scope and methods used for awareness and promotion

D. Types of measurements currently used and who used them

E. Current level of employee participation

III. Outcome

A. Top management commitment that is visibly communicated and demonstrated

B. Long-term strategy development

## Subsection 2.4 - Available Approaches/Potential Barriers

I. Available Approaches

A. Individual employee participation

1. Cash financial

a. Piecework: Wage entirely dependent on production

b. Time payments - Worker paid for standard time at his pay rate regardless of time taken

c. Suggestion System: Worker rewarded for implemented suggestion

d. Well pay: Worker rewarded for job attendance and punctuality

2. Noncash financial

a. Cafeteria benefits: Enables employee to select fringe benefits

b. Longevity benefits: Recognition based on length of service

c. Awards, perquisites: Specific recognition for specific individual achievement and/or service

3. Nonfinancial

a. Earned Time: Employee exceeding production or attendance earns time off

b. Flexitime: Gives employees certain latitude in setting own starting and quitting time

c. Job enrichment: Modify task to give employee complete price of work

d. Performance feedback: Gives employee regular, objective evaluation of his work

B. Group participation

1. Cash financial

a. Profit/Gain sharing: Profit paid to participating employees at end of fiscal year

b. Scanlon Plan: Bonus calculation for productivity measurement based on ratio of sales to labor costs.

c. Rucker Plan: Bonus calculation for productivity measurement based on ratio of value added to labor costs.

d. Improshare: Bonus calculation for productivity measurement based on ratio of standard hour to actual hour.

2. Noncash financial

a. Fringe benefits: Insurance, training, pensions, stock options, social security

b. Awards, perquisites: Specific recognition for group achievement

3. Nonfinancial

a. Quality of work life: Focus on employees, job satisfaction and self-worth

b. Quality Circles: Groups of employees from the same work areas voluntarily meeting to solve task-related work problems in their area

c. Team building: Two or more individuals meeting to work through tasks and interpersonal issues that may impede the team's functioning.

d. Communications: An organized program emphasizing two-way communication of needs, problems, and progress

e. Safety programs: Group effort to reduce frequency and severity of accidents

II. Potential Barriers

A. Lack of management commitment
B. Inadequate management planning and preparation
C. Lack of resources
D. Insufficient program planning and goal setting
E. Unrealistic or inappropriate objectives and time frame
F. Insufficient union involvement
G. Attitudes which lead to "quick fix"
I. Inadequate training

Supplemental Materials

I. Article

1. "Out of the Productivity Box"

II. Exercise

1. Management Practices Audit

III. Case Study

1. Babcock & Wilcox

IV. Suggested Films and Audio/Visual Aids

1. "A case of Working Smarter, Not Harder"
McGraw-Hill Training Systems, P.O. Box 641, Del Mar, CA 92014

2. "Leadership: Style or Circumstance", McGraw-Hill Training Systems

3. "Effective Uses of Power and Authority" McGraw-Hill Training Systems

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# Out of the Productivity Box

William B. Werther, Jr.



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Four elements seem to be common to the efforts of companies who have been successful in increasing productivity by enhancing the quality of work life of their employees.

Productivity is a national problem. The productivity growth rate of the United States lags behind the rates posted by every other industrial country in the free world. As a national problem, many executives and academicians seek solutions at the national level that involve deregulation, depreciation incentives, tax credits, and other changes in fiscal and monetary policy. Other executives, however, are focusing their attention on company-wide productivity improvement efforts. These top managers realize that the source of all productivity gains is the people who create the firm's goods or services. Companies such as Beech Aircraft, Control Data, IBM, General Motors, Texas Instruments, Motorola, and others have begun their own productivity improvement programs. Although the pattern they follow is not a formula, their experience can offer insights to executives who are concerned about corporate productivity and its impact on employees.

The common elements of these corporate productivity strategies include productivity measurement, communications to employees about productivity, elimination of management myths, and employee involvement. Not all of these tactics are used by each company. But combinations of these elements form the foundation upon which productivity gains are based.

## Productivity Measurement

Productivity and financial measures are not the same. For example, during a severe recession profits may disappear at the very same time plant management is improving productivity. Productivity is a reflection of how well resources are used to create outputs. Even efficient plants can show losses during a recession. Likewise, during a boom, inefficient plants can operate profitably.

The first problem in measuring productivity is deciding what to

Reprinted from *BUSINESS HORIZONS*
September / October 1982
No. 82509

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"Only by fully using
the knowledge and creativity
of all employees—from executives to mailboys—
can top management hope to attain . . .
30, 50, or 150 percent productivity
gains."

measure. Many firms already measure some aspects of productivity. For example, Beech Aircraft measures pounds of material per work hour. A plant in Westinghouse's Sturtevant Division measures actual time jobs take to perform compared with the time the job reasonably should take. Both the Beech Aircraft and Westinghouse measures are effective, but they are only partial productivity measures.

Partial measures direct attention to only one element of productivity—usually labor productivity. Both Beech and Westinghouse can get improvements in labor productivity through massive capital investments. However, the total productivity of these operations would benefit little (if at all) by adding expensive equipment that is often idle. It is possible to substitute other resources, such as capital, to improve labor productivity. However, the substitution must improve the ratio of outputs to all inputs—labor, capital, materials, and energy.

A total factor productivity measurement system has been developed by the American Productivity Center in Houston, Texas. It is based on traditional accounting records and consists of a computer program that factors out price changes to determine the productivity contribution made by labor, capital, materials, and energy. The system eliminates the effects of changing prices and identifies the productivity contribution of labor, capital, materials, and energy. The result is an executive report that allows top management to monitor overall productivity improvement and the contribution each factor makes toward that improvement. Line managers with hands-on responsibility learn (often for the first time) how the mix of resources affects productivity improvement.

### Awareness

Productivity measurement does not, by itself, enhance a company's productivity. What measurement does is to increase awareness. It focuses executive attention on productivity in addition to profits and ROI. Awareness leads to profit and to cost centers becoming "productivity centers."

Slow increases or outright declines in productivity alert top management to future problems, often before evidence is found in sales, profit, or ROI figures. Poor financial performance at a productivity center may be the result of forces beyond middle management's control, particularly during a recession or when competition increases. But middle managers who skip proper maintenance or appropriate investment to boost short-term profits or ROI will leave behind them a telltale sign of declining productivity.

### Communicating Information

To most people, productivity improvement means working harder. And, at times, working harder is exactly what is needed. However, the major gains in productivity come from working smarter.

"You can't drive a good work force 30 percent harder," Eastman Kodak Chairman Walter Fallon told conferees at a productivity conference two years ago. "But we've found that we could often work 30 percent or 50 percent *smarter*." Working smarter, Fallon said, means imparting a strong sense of teamwork and giving employees more say about how they do their jobs.[1]

Information is the first prerequisite to creating teamwork and giving employees a say about their jobs. They must be told what productivity is and why it's important. That is, top management must make businessmen and businesswomen of its employees.

Workers see multi-million dollar facilities, expensive equipment, and management expense accounts and may conclude that the company is successful. So why should

1. Charles G. Burck, "Working Smarter," *Fortune*, June 15, 1981: 70.

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they be concerned about productivity? Almost like a well-intentioned parent, management shields employees from knowledge of their profit margins, the impact of competitors, and current productivity measures. Not only does a lack of interest result, but employees may feel that management does not trust them. Ask a typical hourly worker what his or her productivity was last week. Few can tell you. Yet it is the worker and first-level supervisor who shape the firm's productivity and ultimately its success.

In Westinghouse's Sturtevant Division, productivity figures are posted each week for each supervisor. Once a week, the supervisor calls a "work-place meeting." The meeting is used to tell employees how the group's productivity fared during the past week. Discussions are held about productivity barriers that the group can address or get addressed. The supervisor also informs employees about new contracts, competition, the need for quality to get repeat business, and other concerns of mutual interest to management and workers. The result? In the first year of the program, productivity increased 7 percent.

At a Phillip-Morris cigarette factory, plant management realized it had at hand a wealth of information, collected by various line and staff departments for government and management reports. When the data revealed a problem, the supervisor was told of it. Top management decided, why not make all this information available to supervisors in a usable form? Now a short monthly report is compiled for each supervisor. The printouts show output, tobacco-waste, machine down-time, accidents, absenteeism, remaining vacation days, and other data. These figures are shown as year-to-date totals and the past month is compared to the same month last year. Then each month, supervisors get together with their workers and openly review the report. Phillip-Morris is making businessmen and businesswomen of its employees and increasing the use of open communications.

With this information, employees at Phillip-Morris and Westinghouse can work smarter. They have the information needed to do their job better. They know management is keenly interested in productivity improvement. When higher productivity levels are achieved, employees get feedback (and, we hope, recognition) from their supervisor.

## Management Myths

Measurement and communications are only preliminary steps. They set the stage for the centerpiece of any firm's productivity effort: Increasing productivity through employee involvement. Only by fully using the knowledge and creativity of all employees—from executives to mailboys—can top management hope to attain the 30, 50, or 150 percent productivity gains alluded to by Eastman Kodak's Chairman, Walter A. Fallon.

As more executives become aware of the "employee involvement strategy," there lurk some major pitfalls—pitfalls unlike those encountered by most executives. The employee involvement strategy means a fundamental shift in the organization's culture.[2] Folkways, mores, and myths must be altered. These changes cannot be ordered; implementing an employee involvement strategy is not as simple as a corporate merger or entering a new industry. The deep-seated, seldom expressed attitudes of managers must reflect a belief that employees can and want to do a better job. That belief must cascade down from the top management to each hourly employee. It must be supported with sincere opportunities for employees to contribute to the decisions that affect them and their jobs. And, finally, the good ideas of employees must be implemented with dispatch and recognition for those involved.

Even when these beliefs are held by top management, contrary myths exist throughout many organizations in the United States. Unless these myths are exploded, the employee involvement strategy will fall short of its potential and may even fail.

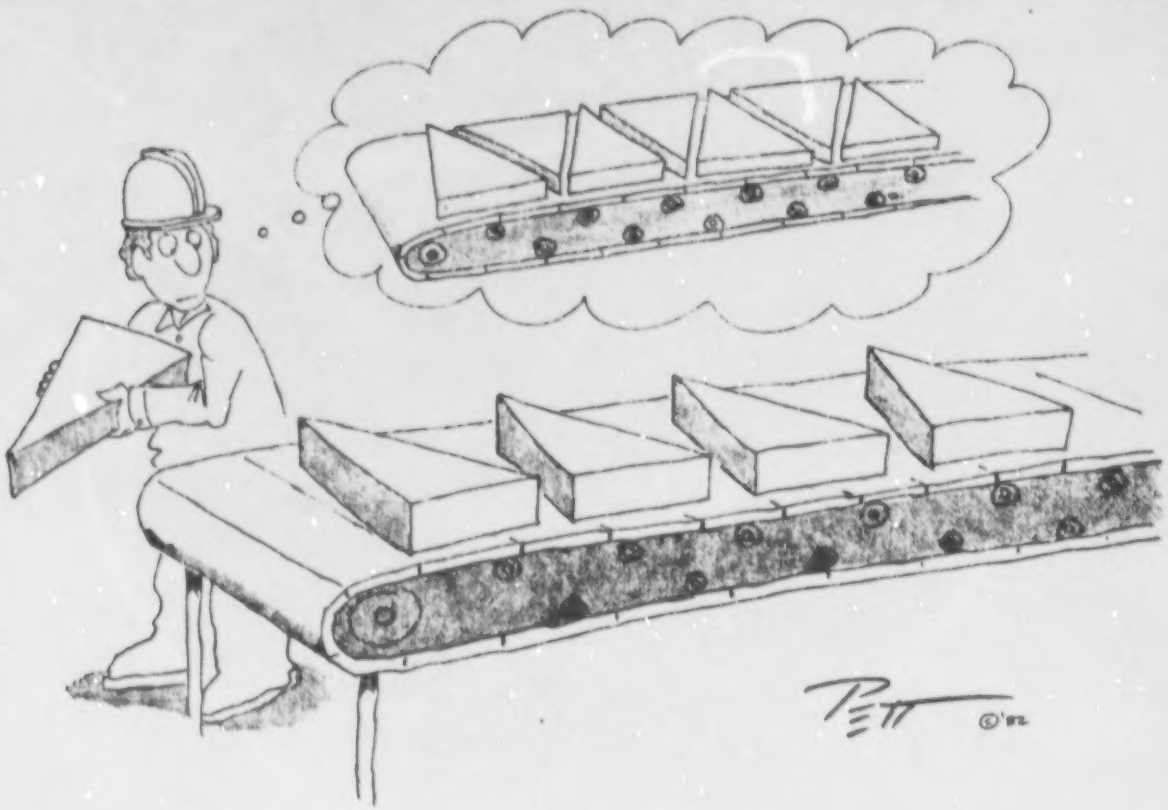
### The Decision-Making Myth

Middle- and first-level managers mistakenly believe they are paid to make decisions. Instead, their job is to get decisions made and implemented. The distinction between making decisions and getting decisions made is subtle but important. A manager who believes he or she should make decisions deprives subordinates of involvement in the decision making process. Employees have no sense of ownership and little commitment to the decisions of others. The result is often resistance to change or half-hearted implementation.

An effective decision requires five steps: identify the problem or opportunity, generate alternatives, select, implement, and control. These five steps are the same regardless of culture. However, Japanese managers put greater emphasis on the first two steps in an attempt to build consensus, so these first steps take longer for them than for their U.S. counterparts. But once a decision is made, implementation is quick with less resistance to it and less need for control. United States' managers generally prefer to define the issue, generate alternatives, select one, and then implement it, usually with resistance by those affected.

The key difference is not the speed with which decisions are made, but rather the underlying

2. Robert Granford Wright, *Mosaics of Organization Character* (New York: Dunellen Publishing Company, 1975): 17.



philosophy. The Japanese seek to involve those affected by a decision. This characteristic is as true among executives as it is at the supervisory/employee level. Those affected participate; therefore, they are more likely to be committed to the decision. This commitment means less resistance to change and less need for follow-up controls.

### The Cost/Benefit Myth

Closely allied to the decision-making myth is the cost/benefit myth. This widely held belief states that an idea must hold a benefit greater than its cost if it is to be implemented. If benefits do not exceed costs, the idea is rejected. This seemingly logical approach results in many ideas being rejected and sets the wrong climate for an employee involvement strategy.

What is needed is a no harm/implement philosophy. Ideas—especially those of hourly employees—should be implemented unless they lead to some harm. Marginal ideas that cost little and contribute little are used. The impact of these ideas on bottom-line profits is negligible. But, an atmosphere is set. Employees realize that management genuinely wants their ideas and will use them if at all possible. As the corporate culture becomes more receptive to employee ideas, more ideas are offered.

At this juncture, some supervisors miss the point by arguing, "Well, why not just implement the really good ideas?" To get the good ideas requires an organizational climate that is receptive to all ideas—good or bad. Employees accept the rejection of ideas that cost more to implement than they pay back if the supervisor explains the costs. What employees have a hard time understanding is why a relatively costless idea is not used. To tell an employee that the cost of moving a machine closer to the work station is not cost justified sounds like an excuse to the employee. Since the worker believe the idea to be sound, the supervisor's behavior communicates a lack of interest in the employee and the employee's productivity.

With a no harm/implement philosophy a mutual respect for each other's ideas emerges. Ideas are "kicked around" in open discussion. And since many ideas will make the work more productive and more enjoyable, the result is increased productivity and quality of work life.

### The Quality Myth

Quality is elusive. Everyone knows it when they see it. But it is hard to define and even harder to measure. Many firms say that they pride themselves on quality, but that is often not the message sent to employees.

Although executives realize that increases in quantity and drops in quality do not add up to productivity improvement, that



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message may be lost before it reaches supervisors and workers. Consider what happens when a new employee sees a defect and tells the supervisor. If the supervisor is being measured only on quantity (sometimes erroneously called productivity), the employee may be told, "Don't worry about it. Quality control will catch it." The message the employee hears is, "quantity matters, quality doesn't." Not only does the employee fail to report future defects, that worker's commitment to quality work drops. Or, the supervisor may show concern by finding out who created the defect. Once discovered, discipline follows. The employee who reported the error quickly receives peer pressure not to report defects if he or she wants to be accepted by co-workers. Either way, quality suffers.

Communications programs can raise the quality consciousness among supervisors and workers, as Westinghouse's Sturtevant Division did. But those communications must be compatible with the behavior of supervisors and management. One way to make the words and behavior reinforce each other is by giving employees responsibility for quality. Consider how quality is maintained at one Toyota plant. Strung down the assembly line is a "stop-cord." By pulling it, anyone along the line can stop production. Workers can pull it for either one of two reasons: safety or quality. When pulled, the assembly line stops. A supervisor rushes over to the employee and discusses the problem. If it is a quality problem, it is tagged or fixed right there. Then the line starts up.

When U.S. managers are told of this innovation, they usually offer a nervous laugh followed by pleas of impracticality. "Do you know what it costs to shut an assembly line down for five minutes?" is the standard response. Of course, the answer to that question is another: "What does it cost to ship defective products?"

Again, behavior speaks louder than words. What really happens when the line shuts down besides costly delays? First, everyone knows a problem exists. The grapevine fills in the details and reports on management's response. Second, each employee gives a sigh of relief to learn he or she is not responsible for the defect. Even those who are blameless rethink their commitment to quality or at least are relieved not to be the cause of a line shut-down. Third, the culprit realizes how important to management his or her job is. Fourth, production resumes with attention to quality, often without the supervisor even identifying the wrongdoer.

People want to take pride in what they do. Pride comes from producing quality products or services. Too often, however, it is management's representative, the supervisor, who presses for quantity at the expense of quality. And, why not? Why not if middle management is always pushing for quantity with only occasional pushes for quality? The punch line is that quality is free. It usually takes no longer to produce quality goods or services than to deal with the repairs, warranty work, and customer ill will. But management behavior often tells employees that quality is secondary to quantity. And employees are bright enough to get the message.

### The People Development Myth

Many of the most successful executives and high-ranking middle managers recognize the role of developing people. By showing commitment to their subordinates' development, they engender loyalty and dedication. When this commitment by management is lacking, company politics may become rampant, loyalty low, and an "everyone for himself" attitude is likely to prevail just below the surface.

The first crack in this myth is the tendency of U.S. firms to rely on layoffs. It is hard to develop people who are likely to be on layoff with the next recession. What kind of climate exists when employees know a layoff notice may come with any paycheck? The irony of this myth is that American management does a much better job of stable employment than it gets (or gives itself) credit for.

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Even excluding fast-growing companies like IBM (which has gone nearly four decades since its last layoff), U.S. firms usually provide remarkably stable employment. For example, during the severe depression faced by the auto industry in 1980, more than 60 percent of the workers kept their jobs. Few firms ever need to cut employment back by as much as 25 percent. Even the vaunted Japanese lay off women and workers beyond "retirement" age, usually ages 55 or 60 and over. It would be folly (and illegal) to follow the Japanese layoff approach. But virtually all major companies could guarantee permanent employment to 75 percent of the workforce based on seniority. "Permanent employment" simply means that one is assured of a job as long as one performs satisfactorily. Period. Realistically, how often does a firm lay off a worker with ten years or more of service? Some companies have recognized how uncommon such layoffs are and have adjusted their policies accordingly. For example, Motorola's personnel policies require the signature of a senior vice president before a ten-year service worker can be involuntarily terminated or put on layoff.

With a permanent employment policy in place, other changes are possible. Covered employees need not fear that a labor-saving idea will threaten their jobs. Auto-

"It usually takes no longer to produce quality goods or services than to deal with the repairs, warranty work, and customer ill will. But management behavior often tells employees that quality is secondary to quantity."

mation is not a threat; it offers hope from a life of monotonous jobs. Workers who figure out how to abolish their jobs are rewarded with new challenges, not fear of the unemployment line. Since permanent employment offers the opportunity of a career-long marriage with the firm, interest in career planning and developmental programs is likely to increase. Management is more strongly motivated to avoid obsolescence among workers who are permanent. Employees recognize that to leave the firm is to give up permanent employment. If they commit themselves to stay, their career progress rests with their further development and commitment to the firm's success. Today, many employees—especially the hard-to-find technical and professional ones—identify career success with their skills and not their current employer. Why should they? The employer's commitment is seen as good until the next paycheck; the employees' commitment is not much longer.

Employee involvement does not require the elimination of the decision-making, cost/benefit, quality, and development myths. These myths are cited merely to illustrate how traditional management values can be contrary to the best interests of employees and organizations. After executives initiate meaningful productivity measures, communicate productivity information to every employee, and alter the corporate culture away from these myths, the climate for an employee involvement strategy is conducive to success.

### Employee Involvement Strategy

An employee involvement strategy is disarmingly simple to define. It is an effort by the company to involve employees in the decisions that affect them. It is not abdicating leadership to employees. It is not anarchy. It is not an egalitarian concept. It is simply good management.

Perhaps the best summary of this strategy is found in a slogan used at Texas Instruments and at Union Carbide's Y-12 plant: "Assets make things possible, people make things happen."

More than anything else, an employee involvement strategy is a realization by all managers that every human being can make some special contribution. If that belief is reflected in the behavior of every level of management, employee ideas and effort are forthcoming. At first, the employee response is discouraging and the commitment tentative. Employees see management's ever-shifting priorities in the form of successive monthly programs. From zero-defect campaigns to energy conservation pushes, the parade of programs causes employees to be skeptical of management's concern for productivity and quality of work life. And, if top management treats the employee involvement strategy as "just another program," it will fail. It will fail because a "program is just that, a program with a beginning and an end. This strategy must be more than a program, it must become a way of life, a long-term redirection in the relationship between employees and management.

As a long-term redirection, it is not a quick fix nor a fix quickly implemented. Once sold on the employee involvement strategy, top managers want action. Someone is appointed to head up implementation. (Fortunately, most companies are appointing high ranking executive who symbolize the firm's commitment.) The executive in charge reads some productivity literature, attends seminars, and makes several plant visits. At this point, top management has been patient but wants action—often on a grand scale. But the newly appointed executive has read and seen that nearly every successful program started small, often with a pilot effort. To delay is to appear indecisive; to begin an expansive effort is to court failure.

The point sometimes missed by all involved is that an involvement strategy aims to change 200 years

of industrial tradition. Starting slow and small allows the strategy to take hold in receptive enclaves. Success stories perk up the interest of middle managers and give the organization time to evolve a new culture. Control Data Corporation, for example, has about 58,000 employees. Its three-year-old effort now has less than 1,000 people involved. Solar Turbine, a San Diego-based subsidiary of Caterpillar, has about 3,500 people, with less than 1,000 employees involved after three years. Both of these companies have skilled administrators with top management support. These successful endeavors are different, but both have been characterized by steady progress which is shaping their organizations' cultures.

Another important issue in the executive suite is the dollars involved. The most reliable figures come from Solar Turbine. During their 18 month start-up period, total outlays were $79,000. Audited savings that resulted from employee ideas amounted to $90,000 on an annualized basis[3] –a respectable return since the $79,000 included one-time costs for the development of training materials and other start-up costs. Since then, Solar's involvement strategy has posted returns of $3 for each $1 spend on the program, a return which is not unusual.[4]

3. Since most productivity efforts are managed by non-financial executives, a peculiar pattern of measuring cost savings has been developed independently by several firms. An employee-generated cost saving is evaluated in terms of the net dollars (savings less cost of implementation) that will be saved during the first year. These savings are usually "audited cost reductions." That is, only directly measurable savings are considered. Savings from higher morale, fewer customer complaints, and the like, are seldom calculated. As a result, cost estimates do not consider a discounted cash stream. These savings are extremely conservative, if not dramatically understated.

4. Another anomaly in evaluating employee involvement strategies is the recurrence of rather large savings. In talks with over twenty productivity administrators, each casually discussed return-on-investment figures for their firm to the nearest 100 percent. Although these are exceptionally successful programs, the 300 to 400 percent figure seemed commonplace, with some managers citing returns over 1,000 percent!

Perhaps more importantly, these returns do not include financial benefits from the commonly reported gains in employee morale, lower turnover and absenteeism, improved cooperation, or renewed commitment to productivity and quality that result from the involvement strategy.

Here, too, lies a pitfall for top management. A strong focus on the financial benefits of the strategy can destroy it. If employees sense that the involvement strategy is merely a cost reduction program and not based on improving their quality of work life, they may see little benefit for themselves and withdraw their involvement. Control Data avoided this potential pitfall from the outset by simply not tracking the savings from employee involvement. Other firms have measured the dollar savings carefully, but these programs are employee centered.

### Involvement Theme and Motives

It would be naive to suggest that employee involvement strategies are implemented solely out of human kindness. Corporations must improve productivity to survive. But to avoid the "cost-reduction-program" syndrome, some firms have initiated their involvement effort with the following directive to employees: "Find ways to make your job easier."

This "make-your-job-easier" approach is not the dictum of soft-headed executives. It is a practical realization that there must be something in this process for the employees. Initially, this emphasis stimulates employee interest. Once employees become immersed in solving job-related annoyances, feelings of accomplishment, importance, and satisfaction become internal motivators. That is, the problem-solving process carries its own inherent rewards of achievement and recognition. Once obvious annoyances are addressed, attention shifts to production or to service-related issues that are of concern to management. Even when the employees are solving problems of interest to themselves, management benefits.

The important point is that the involvement strategy must focus on improving the workers' situation. An involvement strategy based on a theme of seeking only higher productivity is unlikely to succeed. And an approach heavily burdened with measuring the cost reduction from this strategy may communicate the wrong theme and motives.

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### Involvement Tactics

With a commitment to an employee involvement strategy, specific tactics become important. Research done by the American Productivity Center in Houston indicates three broad approaches have met with considerable success in American firms. They are: communications, team building, and suggestion systems.[5] Some companies use all three–General Motors and IBM are prominent examples. Other firms focus primarily on communications (for example, Phillip-Morris Cigarette Division), team building (Champion International's Paper Division), or suggestion systems (Allen Bradley and Beech Aircraft). Since the role of communications was discussed earlier, attention here is directed at team building and suggestion systems.

**Team building.** Perhaps the most widely discussed form of team building is quality control circles or, more simply, quality circles. Quality circles are groups of employees voluntarily meeting with their supervisor to resolve work-place problems of interest to the group.

Selected supervisors are told about the quality circle concept and asked if they want to be involved. If the answer is yes, it is explained to their employees. If they volunteer, training begins. Supervisors generally receive two

5. *How to Involve Employees in Productivity Improvement* (Houston: American Productivity Center, 1981).

"A strong focus on the financial benefits of the strategy can destroy it. If employees sense that the involvement strategy is merely a cost reduction program and not based on improving their quality of work life, they may see little benefit for themselves and withdraw their involvement."

days of training in leadership, group dynamics, conference skills, and problem-solvng techniques. Then employees are given one day of training, primarily in problem solving methods such as brainstorming, Pareto analysis, cause-and-effect diagrams, and data collection. The supervisor and employees then meet for one hour per week to identify and solve problems that directly affect their jobs. By allowing a consensus to emerge on which problems should be studied, employee commitment is assured and resistance to change is unlikely. Solutions are presented to higher management for approval and implementation.

The training and coordination of circle activities is handled by a facilitator. Facilitators are usually industrial engineers or human resource specialists. They normally are given an intensive five-day training program in quality circles, problem solving techniques, organization behavior, and other aspects of employee participation groups.

A steering committee oversees the facilitator's efforts, plans the scope and budget for this involvement tactic, and attends circle presentations. Its composition is the site or division manager and his or her direct reports. Together they are responsible for the effectiveness and spread of the quality circle effort.

Other forms of team building vary the training, support structure, or team composition. For example, Champion International's extremely successful approach consists of team members from different departments, with an elected or emergent leader, that may meet for longer than an hour once or twice a month. However, all team building approaches are characterized by groups of employees meeting periodically to identify and resolve workplace problems that affect quality of work life, productivity, or both. Another common characteristic is training for all team members in problem-solving techniques.

With the support of peers, training from facilitators, and management encouragement to solve problems, a team and team spirit emerge where there had been merely a group. The cohesiveness of the members and a common focus on problem solving generate ideas that solve problems. Employees remove a source of dissatisfaction and get recognition and a renewed sense of self-esteem. Management benefits from the collective experience and wisdom of the group. As a slogan at Champion declares: "None of us is as smart as all of us."

**Suggestion systems.** To some, suggestion systems may seem neither particularly new nor an involvement technique. Certainly, they are not new; Eastman Kodak has had their program in effect continuously since 1898. Suggestion systems are discussed here because they are an effective involvement technique.

They are an involvement technique because modern suggestion systems dispense with the outdated suggestion box. Instead, the employee confers with his or her supervisor about the idea. The supervisor helps to refine the idea and put it in writing. That is, the supervisor and employee are both involved. Next it goes to a suggestion system administrator. It is recorded, acknowledged, reviewed, and sent to the appropriate department for evaulation—often industrial engineering. Once evaluated, a decision is made. Implementation and an award to the suggestor usually follow.

When supervisors are evaluated on their success in generating employee suggestions (as Honeywell does) or when supervisors receive a share of the savings, they become receptive to and supportive of employee ideas. Since most employee awards are compensated with a percentage of the savings or with mementos (such as pens, caps, glasses), the net savings accrue to the firm and the employee gets the satisfaction of seeing his or her good ideas implemented.

## Toward Our Future

In the early days of the Industrial Revolution, employees came from farms, backgrounds of poverty, or oppression overseas. Certainly, a job in industry was not always a pleasant prospect in those days. But compared to starvation, oppression, or seven-day weeks with 15-hour working days on the farm, jobs in industry often beat the other options.

Today we have a workforce that has never known starvation, political oppression, or 100-hour workweeks. Today's workers largely grew up in an age of post World War II affluence overlaying a foundation of social services and company benefits that assured minimal levels of survival. For better or for worse, today's worker has expectations about the world of work formed by six hours of television a day, open classrooms, and a more permissive approach to child rearing. Those with even modest skills are in demand and can job-hop almost at will.

If we are to move out of the productivity dilemma facing the United States it must begin where productivity begins: on the job. Admittedly, tax reform, lower interest rates, and less government regulation would help. But the productivity battle is won or lost among employees.

To win, productivity must be measured and communicated. Management myths and traditions must give way to a new reality—a reality that involves people in the workplace and decisions that affect their quality of worklife and productivity. A new partnership between management and employees must be sealed with an effective employee involvement strategy. The tactics selected are less important than the philosophical and behavioral commitments that are made toward employees and toward our future. Without that commitment, we are unlikely to reach our industrial potential. Without that commitment, we are unlikely to get out of the productivity box. □

# MANAGEMENT PRACTICES AUDIT

## PART 1 – MANAGEMENT FUNCTIONS AND PRACTICES

### INSTRUCTIONS

Below are forty (40) statements that could be characteristic of any manager or supervisor. Decide the extent to which you agree that each statement describes the behavior of the person being rated. Then indicate your decision by placing a check mark ( ✓ ) in the appropriate box to the right of the statement.

| The person being rated | Strongly Agree | Somewhat Agree | Somewhat Disagree | Strongly Disagree |
|---|---|---|---|---|
| 1 Has good conceptual skills. | [ ] | [ ] | [ ] | [ ] |
| 2 Can think in both abstract and concrete terms. | [ ] | [ ] | [ ] | [ ] |
| 3 Anticipates future conditions accurately. | [ ] | [ ] | [ ] | [ ] |
| 4 Has good analytical skills. | [ ] | [ ] | [ ] | [ ] |
| 5 Considers all aspects of a problem. | [ ] | [ ] | [ ] | [ ] |
| 6 States objectives precisely. | [ ] | [ ] | [ ] | [ ] |
| 7 Develops measurable goals and objectives. | [ ] | [ ] | [ ] | [ ] |
| 8 Ensures that objectives and goals are realistic. | [ ] | [ ] | [ ] | [ ] |
| 9 Plans effectively. | [ ] | [ ] | [ ] | [ ] |
| 10 Develops workable strategies for putting plans into effect. | [ ] | [ ] | [ ] | [ ] |
| 11 Effectively organizes necessary resources. | [ ] | [ ] | [ ] | [ ] |
| 12 Respects the chain of command. | [ ] | [ ] | [ ] | [ ] |
| 13 Delegates whenever possible. | [ ] | [ ] | [ ] | [ ] |
| 14 Matches authority with responsibility. | [ ] | [ ] | [ ] | [ ] |
| 15 Makes full use of available resources. | [ ] | [ ] | [ ] | [ ] |
| 16 Determines appropriate manpower requirements. | [ ] | [ ] | [ ] | [ ] |
| 17 Maintains realistic balance between direct and indirect labor. | [ ] | [ ] | [ ] | [ ] |
| 18 Possesses good employment interviewing skills. | [ ] | [ ] | [ ] | [ ] |
| 19 Understands legislation affecting employment practices. | [ ] | [ ] | [ ] | [ ] |
| 20 Properly matches skills of employees with job requirements. | [ ] | [ ] | [ ] | [ ] |
| 21 Ensures that subordinates are properly trained. | [ ] | [ ] | [ ] | [ ] |
| 22 Makes clear, understandable work assignments. | [ ] | [ ] | [ ] | [ ] |
| 23 Distributes work fairly. | [ ] | [ ] | [ ] | [ ] |
| 24 Provides subordinates with meaningful work. | [ ] | [ ] | [ ] | [ ] |
| 25 Uses rational problem solving methods. | [ ] | [ ] | [ ] | [ ] |
| 26 Recognizes subordinates for good performance. | [ ] | [ ] | [ ] | [ ] |
| 27 Communicates effectively with subordinates. | [ ] | [ ] | [ ] | [ ] |
| 28 Works effectively with other departments. | [ ] | [ ] | [ ] | [ ] |
| 29 Coordinates projects effectively. | [ ] | [ ] | [ ] | [ ] |
| 30 Coaches and helps subordinates when necessary. | [ ] | [ ] | [ ] | [ ] |
| 31 Informs subordinates about job standards. | [ ] | [ ] | [ ] | [ ] |

| | Strongly Agree | Somewhat Agree | Somewhat Disagree | Strongly Disagree |
|---|---|---|---|---|
| 32. Regularly checks performance against standards. | [ ] | [ ] | [ ] | [ ] |
| 33. Develops effective control systems. | [ ] | [ ] | [ ] | [ ] |
| 34. Adheres to schedules and deadlines. | [ ] | [ ] | [ ] | [ ] |
| 35. Appraises employees about their performance. | [ ] | [ ] | [ ] | [ ] |
| 36. Follows established procedures effectively. | [ ] | [ ] | [ ] | [ ] |
| 37. Takes decisive action with non-performers. | [ ] | [ ] | [ ] | [ ] |
| 38. Develops methods to improve department performance. | [ ] | [ ] | [ ] | [ ] |
| 39. Fairly administers employee discipline. | [ ] | [ ] | [ ] | [ ] |
| 40. Demonstrates concern about costs, quality and productivity. | [ ] | [ ] | [ ] | [ ] |

## PART II -- LEADERSHIP STYLE

Below are four sets of leadership practices. Circle the alternative from each set that best describes the leadership practices of the person who is being rated.

SET 1 -- This person motivates subordinates mainly through:

a. power and fear.
b. rewards and some punishment.
c. involvement and recognition.
d. establishing a work climate that is motivating in itself.

SET 2 -- The communication practices of this person are characterized primarily by:

a. downward communication and order giving.
b. some two-way communication, selling and persuasion.
c. considerable two-way communication and problem solving.
d. supportive communication, available when needed.

SET 3 -- When dealing with decision issues this person often:

a. makes them unilaterally.
b. obtains some employee involvement.
c. makes them jointly with employees.
d. expects subordinates to make this on their own.

SET 4 -- After assigning projects to subordinates this person usually:

a. requires rigid compliance with instruction details.
b. provides fairly close follow-up details.
c. monitors the work for problems and results.
d. expects subordinates to handle the project as they see fit.

# MANAGEMENT PRACTICES AUDIT

| | |
|---|---|
| PURPOSE: | To assess the effectiveness of demonstrated management practices and skill in all key components of the management cycle. To help identify leadership styles and preference. |
| DESCRIPTION: | This is a two-part instrument which can help to obtain a multi-level (superior, self and peer) perception of the effectiveness with which managers and supervisors perform various management cycle activities; i.e. planning, organizing, implementing (directing) and controlling, as well as obtain perceptions about the manager's leadership style. Part I of the Management Practices Audit consists of forty (40) response items rated on a Likert type scale. Part II consists of four multiple-choice items in which the manager's leadership style with respect to motivation, decisions, communications and control is assessed. Specific issues covered within the instrument range from conceptual thinking, analytical and diagnostic skills, goal setting, interviewing and counseling skills, work distribution and problem solving, to setting performance standards, employee recognition, intergroup cooperation, use of control systems, handling constructive discipline and skills in improving productivity. |
| VALIDITY: | The construct, or syndrome of interrelated behaviors, which is covered by this instrument is both important and useful. In the design of the instrument every reasonable effort was made to ensure proper universe of content, simplicity of item wording and minimization of acquiesence and social desireability. Normative and reliability data are being developed for publication. |
| ADMINISTRATION: | Self or facilitator administered. Multi-level (self, superior, peer/subordinate) measurement option. Requires 30-35 minutes. |
| APPLICATION: | Management & Supervisory Training.<br>Performance Appraisal.<br>Coaching & Counseling.<br>Self/Professional/Career Development.<br>Leadership Training.<br>Training Needs Analysis. |
| SUITABLE FOR: | Top and middle level managers. |
| SCORING: | See scoring format on reverse side. |

# PART I — MANAGEMENT FUNCTIONS AND PRACTICES

| | ISSUE | SA | SWA | SWD | SD |
|---|---|---|---|---|---|
| PLANNING | 1. Has good conceptual skills. | | | | |
| | 2. Can think in both abstract and concrete terms. | | | | |
| | 3. Anticipates future conditions accurately. | | | | |
| | 4. Has good analytical skills. | | | | |
| | 5. Considers all aspects of a problem. | | | | |
| | 6. States objectives precisely. | | | | |
| | 7. Develops measureable goals and objectives. | | | | |
| | 8. Ensures that objectives and goals are realistic. | | | | |
| | 9. Plans effectively. | | | | |
| | 10. Develops workable strategies for putting plans into effect. | | | | |
| ORGANIZING | 11. Effectively organizes necessary resources. | | | | |
| | 12. Respects the chain of command. | | | | |
| | 13. Delegates whenever possible. | | | | |
| | 14. Matches authority with responsibility. | | | | |
| | 15. Makes full use of available resources. | | | | |
| | 16. Determines appropriate manpower requirements. | | | | |
| | 17. Maintains realistic balance between direct and indirect labor. | | | | |
| | 18. Possesses good employment interviewing skills. | | | | |
| | 19. Understands legislation affecting employment practices. | | | | |
| | 20. Properly matches skills of employees with job requirements. | | | | |
| IMPLEMENTING | 21. Ensures that subordinates are properly trained. | | | | |
| | 22. Makes clear, understandable work assignments. | | | | |
| | 23. Distributes work fairly. | | | | |
| | 24. Provides subordinates with meaningful work. | | | | |
| | 25. Uses rational problem solving methods. | | | | |
| | 26. Recognizes subordinates for good performance. | | | | |
| | 27. Communicates effectively with subordinates. | | | | |
| | 28. Works effectively with other departments. | | | | |
| | 29. Coordinates projects effectively. | | | | |
| | 30. Coaches and helps subordinates when necessary. | | | | |
| CONTROLLING | 31. Informs subordinates about job standards. | | | | |
| | 32. Regularly checks performance against standards. | | | | |
| | 33. Develops effective control systems. | | | | |
| | 34. Adhers to schedules and deadlines. | | | | |
| | 35. Appraises employees about their performance. | | | | |
| | 36. Follows established procedures effectively. | | | | |
| | 37. Takes decisive action with non-performers. | | | | |
| | 38. Develops methods to improve department performance. | | | | |
| | 39. Fairly administers employee discipline. | | | | |
| | 40. Demonstrates concern about costs, quality and productivity. | | | | |

SCORING INSTRUCTIONS: The scoring format below can be used to plot ratings from up to three levels of the organization, Self, Superior and Peer/Subordinate. Average the ratings for each issue for Peer/Subordinate assessments. Then transfer the ratings from each level to the appropriate column for each issue. Connect the ratings of each level by using the legend:

••••••••••••••••=Self
- - - - - - - - - - - - - - - -=Superior
_____=Peer/Subordinate Average

# PART II — LEADERSHIP STYLE

SCORING INSTRUCTIONS: Use the legend to transfer ratings from Part II to the scoring format below. Be sure to average Peer/Subordinate scores (connect a, b, c & d to point values; i.e. 1, 2, 3, 4 and then average).

| X = SELF<br>O = SUPERIOR<br>□ = PEER/SUBORDINATE | 1. MOTIVATION | 2. COMMUNICATION | 3. DECISIONS | 4. CONTROL |
|---|---|---|---|---|
| DIRECTIVE (a) | | | | |
| PERSUASIVE (b) | | | | |
| PARTICIPATIVE (c) | | | | |
| DELEGATIVE (d) | | | | |

Babcock & Wilcox
Quality & Technology Division
P. O. Box 351
Barberton, Ohio 44203
Telephone: 216/753-4511
Management Contacts: Robert P. Meyer, Participative Task Teams Coordinator

Type of Program: Participative Task Teams (Quality Circles)
Date Program initiated: September 1, 1978
Company Units: Nuclear Equipment Division and Tubular Products Division
Number of Employees Involved: 9 teams of 5-10 employees each
Worker Classification: Salaried and Hourly
Structural Characteristics:
Technology -- Manufacturing
Size -- Large
Degree of Centralization -- Decentralized

Through the Participative Task Teams program at Babcock & Wilcox, employees meet in groups to identify, analyze, and solve work-related problems. The company has realized both tangible and intangible results.

## Organizational Background

The Babcock & Wilcox Company is a wholly owned subsidiary of the J. Ray McDermott Company, Inc. B&W is a major international supplier of energy systems, engineered materials and industrial automation systems for utility, industrial, commercial, marine, and government applications. Annual sales exceed $2 billion and there are approximately 40,000 employees located in 24 nations.

Management style is progressive. Attitude surveys, performance appraisals and job analyses are regularly conducted. Employees of the divisions with which this case study is concerned are represented by the International Brotherhood of Boilermakers, Iron Shipbuilders, Blacksmiths, Forgers and Helpers and the United Steel Workers.

## History and Development of the Program

In 1977, the General Manager of the Nuclear Equipment Division expressed a desire at the corporate level to institute a group problem-solving program within his division. The Director of Quality was likewise interested in this area of organization improvement and responded. B&W hired an additional quality engineer, who has also become the Participative Task Teams (PTT) Coordinator. These latter two individuals researched employee involvement in the area and visited domestic, as well as foreign, organizations with Quality Circle programs.


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Babcock and Wilcox bought Quality Circle training materials from outside consultants. The Director of Quality and the Task Teams Coordinator then adapted the materials to fit the needs of the Nuclear Equipment Division.

A PTT Steering Committee, consisting of department managers, a union representative, and the Program Facilitator, was formed. This committee determined the scope of the pilot program, how task team leaders and members would be chosen, team size, whether there would be only blue collar teams, and finally, meeting times and locations. Meeting weekly, the Steering Committee had extensive involvement in the program during the first two or three months.

Description of the Program

Participative Task Teams (PTT) is a management supported, employee group motivation/problem solving program which was pilot tested in the Nuclear Equipment Division of the Power Generation Group of Babcock & Wilcox Company. The program has been expanded to the entire division which has about 1500 employees, as well as the Tubular Products Division. The program is a form of participative management or job enrichment in which employees meet in groups to identify, analyze, and solve work-related problems.

Coordination is provided by the Central Quality Assurance Department. Divisional coordination comes from the PTT Steering Committee and the Personnel Department. The union representative serves on the Steering Commitee in an advisory role. The Steering Committee, which initially met weekly, now meets once a month to review the effectiveness of the program and plan its future expansion. A facilitator plans the meetings and handles room arrangements and supplies.

First line supervisors serve as team leaders. They attend 24 hours of training conducted by the PTT Coordinator. The leaders, in turn, conduct eight one-hour training sessions for team members. Team participation is voluntary, but supervisors encourage their employees to join so they may become involved in decision-making.

Teams of 5-10 workers meet with their supervisor one hour per week on company time. They attempt to solve problems in their immediate work areas, using the quality circle techniques such as Pareto Analysis, brainstorming, cause and effect diagrams, and management presentations. Team members are also interested in economic calculations, so that cost reductions can be identified.

Originally, the division had two teams of salaried employees and four teams of hourly employees. Since September, 1978, those numbers have grown to include four salaried teams and eight hourly teams.

Recognition is given to team members by management involvement in team presentations, company newspapers, and sharing in monetary rewards via the employee suggestion program.


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# MODULE III

# ASSESSMENT AND PREPARATION

Module 3 - Assessment and Preparation

Overview

I. Determine Relative Improvement Potential

   A. Assess operational opportunities

   B. Assess leadership and support

II. Determine organization and structure

   A. Function manager versus productivity manager

   B. Organizational structure

III. Establish Productivity Goals

   A. Corporate

   B. Group

   C. Individual

IV. Select and Plan Approach

   A. Determine support systems

   B. Assess skills required

   C. Determine barriers

   D. Establish rewards and recognition systems

   E. Assess employee-management relations

   F. Secure management commitment

   G. Design measurement system

   H. Design performance feedback systems

Subsection 3.1 - Determine Relative Improvement Potential

I. Assessment and preparation involves taking a more detailed, structured look at your operations to identify:

   A. The relative potential for improvement in different areas of:

      1. Human resources

      2. Technology or capital resources

      3. Material and energy

   B. Leadership style implications

   C. The key individuals in the organization

   D. The organization and structure of the productivity effort

   E. The goals of the productivity effort

   F. The improvement approach; selection and planning for implementation

II. Assessing opportunities

   A. What is it?

      1. Unlike Alice, you care where you are going. You first need to know where you are now!

      2. Many ways to assess

         a. Structured, formal, committee

         b. Unstructured, informal, discussion

         c. Individual, judgmental

   B. Structured ASSESSMENT or AUDIT or DIAGNOSTIC process

      1. Identification of those areas, activities, jobs, functions or practices which are most attractive options for enhancing productivity of the organization

      2. Evaluation of those options

      3. Developing alternative approaches

      4. Establishing priorities

5. Provision for action planning toward full development and implementation of productivity improvements

C. Types of Assessment Techniques

1. Interviews, particularly useful in establishing rapport with respondents can be conducted with individuals or groups and categorized as either unstructured or structured. Unstructured interviews are nondirective and totally client-centered, whereas the format of structured interviews has a directive nature; questions are predetermined and only selected topics are covered. There are advantages and disadvantages in collecting data through interviews. Although this method permits a wide range of data collection, encourages an empathetic relationship between facilitator and respondent(s), and fosters trust, it can also be costly and time-consuming. Coding interview responses is often difficult, and interviewer bias may influence responsents' answers, thereby skewing survey results.

2. Observation, another method of gathering information, can be categorized as structured, semi-structured, or unstructured. In a structured observation, guidelines are very specific and the observer must record all interactions precisely. A semi-structured observation includes few guidelines but does necessitate the detailed recording of specific interactions. An unstructured observation provides the observer total flexibility in selecting what to observe and what to record.

   Although observation allows a firsthand view of behavior and is adaptive to various situations and circumstances, like the interview, it tends to be a costly and time-consuming procedure. In addition, observation data can be difficult to code, and observer bias plus the effect of the observer's presence within the organization may skew survey results.

3. Secondary analysis is yet another way in which an organization may collect data. Records, files (absenteeism, lateness, grievance, performance) provide information which aids in assessing an organization's need for change. Although data gleaned through secondary analysis has a high face validity and is easily quantified, it may be difficult to obtain (buried in obscure files, considered confidential, etc.) and its quality difficult to control.

4. The survey questionnaire is the method most widely used in assessing need for organization change. An organization may choose to administer either a customized or standardized questionnaire. A custom instrument, designed to meet the needs of a particular organization, is usually devised by a committee comprising, for example, the organization's president, chief personnel officer, director of industrial relations, representatives of marketing and planning, and an external consultant(s).

Writing questionnaire items is not easy, for statements/questions must not be in any way ambiguous. Once the instrument has been designed, it is tested on a pilot group. Modifications suggested by results of the pilot test are made, and a final questionnaire is then constructed and administered to the organization.

A standardized questionnaire differs from a customized instrument in that it is designed for use in many different organizations. Questions have already been pretested and refined, thus relieving the organization of these responsibilities.

As a method of gaining information, a questionnaire has advantages and disadvantages. Questionnaires can cost less, take less time to implement, and afford fewer coding problems than other means; however, it is a relatively impersonal instrument and can inadvertently encourage response bias.

III. Assessing Leadership Style

A. Leadership Style -- Impact every other element of a productivity/quality of work life effort:

1. How the effort is organized.

2. How goals and objectives are established and communicated.

3. Scope and methods used for awareness and promotion.

4. Types of measurements used and who uses them.

5. Level of employee participation.

B. Three leadership styles:

1. Autocratic

2. Paternalistic

3. Consultative

IV. Assessing Individuals

A. Identify key individuals in your company:

1. Management support for the program
2. Participants in the program
3. Those affected by the program
4. Members of the productivity organization

B. Example

SCOUTING MATRIX

Critical Initiation of Change

| Key Individuals or subsystems | Influence | Readiness | Supportiveness | Capabilities | Wishes-felt needs |
|---|---|---|---|---|---|
| VP Production | ++ | - | - | + | Retire |
| VP Personnel | 0 | 0 | 0 | + | Bigger Empire |
| Plant Managers | + | + | + | + | Promoted |
| Accting. Dept. Controller | + | ? | ? | ++ | Use their expertise |

Implications:

1. VP of Production has a lot of influence but since he is about to retire, I need other support. I'll look at his potential successors.
2. Perhaps I can convince the VP of Personnel that this effort will use his department and will increase their credibility. If not, he could be a problem because we need their skills.
3. Plant managers are key. I will start talking to them immediately.
4. All of these people are potential Steering Committee/Council members.

SCOUTING MATRIX

Definitions: (-) Rated negative on the element
(0) Rated neutral or not relevant
(+) Rated positive on the element

| Score | Don't Know | Critical Elements |
|---|---|---|
| -,0,+ | ? | 1. Influence -- relative ability to determine organization decision process or outcome. Can affect or influence others responsible. |
| -,0,+ | ? | 2. Readiness -- relative acceptance of need for program |
| -,0,+ | ? | 3. Support -- relative willingness to approve/reinforce proposal in decision process. Traditionalist, innovator, comer, loser, resistant to change, etc. |
| -,0,+ | ? | 4. Capability -- relative skills to effect positive decision |
| | | 5. Personal Goals -- wishes or felt needs of individual or subsystem. |

| Key Individuals Subsystems | Influence 1 | Readiness 2 | Support 3 | Capability 4 | Personal Goals 5 (itemize) |
|---|---|---|---|---|---|
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |

Implications:

Additional comments:

5. Union Involvement

A. In an organized labor environment, involving union leaders in the productivity/quality of work life effort is necessary:

1. To secure a cooperative effort

2. To aid in communication to employees

3. To encourage employee acceptance of the program

B. What are some "do's" and "don'ts" when preparing for a productivity/quality of work life effort in an organized labor environment?

1. Get all key leaders involved from the beginning

2. Separate the productivity/quality of work life effort from the negotiations process

3. Don't allow the effort to take over the function of labor organization

4. Don't allow the effort to take over the function of management

## ASSESSING LEADERSHIP STYLE

| | | | | | |
|---|---|---|---|---|---|
| 1. | How much confidence and trust is shown in subordinates? | Virtually None | Some | Substantial Amount | A Great Deal |
| 2. | How free do subordinates feel to talk to superiors about job? | Not very Free | Somewhat Free | Quite Free | Very Free |
| 3. | How often are subordinates' ideas sought and used constructively? | Seldom | Sometimes | Often | Frequently |
| 4. | What is the usual direction of information flow? | Downward | Mostly Downward | Down And Up | Down, Up & Sideways |
| 5. | How is downward communication accepted? | With Suspicion | Possibly With Suspicion | With Caution | With Receptive Mind |
| 6. | How accurate is upward communication? | Usually Inaccurate | Often Inaccurate | Often Accurate | Mostly Accurate |
| 7. | How well do superiors know problems faced by subordinates? | Not Very Well | Rather Well | Quite Well | Very Well |
| 8. | How concentrated are review and control functions? | Very Highly At Top | Quite Highly At Top | Moderate Delegation To Lower Levels | Widely Shared |
| 9. | Is there an informal organization resisting the formal one? | Yes | Usually | Sometimes | No-Same Goals as Formal |
| 10. | What are cost, productivity, and other control data used for? | Policing, | Reward & Punishment | Reward, Some Self Guidance | Self-Guidance Problem Solving |

Source: Rensis Lickert: The Human Organization, 1967.

Subsection 3.2 Determine Organization and Structure

I. Selecting and planning an improvement approach for your organization:

A. Major considerations for determining which improvement approach is suited to your organization include:

1. Company history with productivity and quality of work life efforts

2. Goals of the organization

3. Leadership style within the organization

4. Structure of the organization

a. Type of operation
b. Size
c. Degree of centralization/decentralization

5. Organizational climate

a. Employee/Management cooperation
b. Communications flow

6. Employee education

B. Other planning considerations before implementation:

1. Secure management commitment

2. Provide necessary support systems

3. Identify skills required

4. Locate potential barriers

5. Provide for rewards and recognition

6. Design measurement system

7. Design performance feedback system

Subsection 3.3 Establish Productivity Goals

I. Questions to consider in setting goals:

A. What goals do you have now?

B. Do you have measures related to $\frac{O}{I}$?

C. Are data available to compute the measures?

D. Who should be involved in determining goals?

E. How will productivity goals relate to your performance appraisal system?

II. Measuring achievement of goals is necessary:

A. Corporate goals: simple to complete measures

B. Group and individual goals: simple measures

III. When writing goals that are managerially useful, the following components are necessary:

A. Area for improvement

B. A measure indicator

C. A level or degree of improvement

D. Time period

IV. Techniques currently in use for establishing goals include:

A. Management by Objectives (MBO)

B. Nominal Group Technique (NGT)

C. Delphi Method

V. When communicating goals to peers and/or subordinates:

A. Clarify

B. Provide feedback

C. Use controls relative to goals

Subsection 3.4 Select and Plan Approach

I. Criteria for Selection

A. Management Style

1. Autocratic
2. Benevolent autocratic
3. Consultative
4. Participative

B. Management behavior

1. Give detailed instructions
2. Share goals
3. Ask for input
4. Share gains

C. Supervisory behavior

1. Tell
2. Sell
3. Participative
4. Delegate

D. Employee behavior

1. Obey
2. Obey willingly
3. Contribute
4. Decide

E. Union/Management Relationships

1. Adversarial
2. Collaborative

F. Communication

1. Secret

2. One-Way

3. Two-Way

4. Four-Way/Open

G. Organizational Structure

1. Fragmented hierachy

2. Functional hierarchy

3. Matrix

4. Self-designing

II. A. Sharing of Business Information

Sharing business information involves relaying data about organizational performance, profitability, and productivity. This is typically a one-way communication process where employees are made "privy" to information that is traditionally guarded by organizations.

B. Suggestion Systems

Suggestion systems are a formal and organized approach to soliciting organizational improvement ideas from employees. Rewards for suggestions are typically based on cost savings. Employees are involved in generating organizational improvement ideas, and the level of participation in evaluating and implementing ideas is situational dependent.

C. Nominal Group Technique

Nominal group technique is a group problem-solving of idea-generating strategy used to arrive at a group decision in a relatively short period of time. Nominal groups are not long-term, on-going problem-solving groups. Employees are involved in generating, discussing and voting on organizational improvement ideas.

D. Organizational Surveys

Organizational surveys are a method of polling organizational members to determine what is felt about the organization, its practices, and its procedures. This is a limited form of "voice" where employees are involved in responding to questionnaires or interviews.

E. Temporary Task Force or Committees

Temporary task forces or committees are groups of people formed to work on a specific task for a designated period of time. The task force is usually responsible for identifying problems and making recommendations.

F. Survey Feedback

Survey feedback is the systematic gathering and feeding back of information which is used to direct the future of the organization. Employees participate in the survey process and are involved in feedback and action planning sessions.

G. Team Building

The objective of team building is the improvement and increased effectiveness of various "teams" within the organization. Those teams may be permanent work groups, task forces, committees, management groups, etc. Team building is frequently a variable and sporadic process which involves team members in diagnosing and improving processes and working relationships.

H. Quality Control Circles

A small groups of employees from the same work area who meet regularly to identify and solve quality related problems. Quality Circles are a permanent organizational structure and typically meet once a week.

I. Parallel Organization

Parallel organizations are formal, participatory, problem-solving structures which are institutionalized alongside the conventional line organization. This additional management structure amy consist of task forces within their own management group and may have responsibility for carrying out routine tasks.

J. Employee Participation Groups

Employee participation groups are mechanisms for facilitating organizational change. These groups are permanent, ongoing structures that are made up of small groups of people from the common and related work groups that identify, analyze, solve and implement solutions to organizational problems.

K. Sociotechnical Systems

Sociotechnical systems interventions involve the restructuring of work methods, rearrangement of technology, or redesign of organizational social structures. The objectives of these interventions is to optimize the relation. Employees are involved in the redesign, implementation and monitoring of the systems within the organization.

L. Interface Teams

Interface teams consist of intra-organization (departments, divisions, shifts) problem-solving or decision-making groups. These teams implement ideas relating interface issues.

M. Autonomous Work Teams

Autonomous work teams are self-managing groups which have total responsibility for their products or services. Team responsibilities can include selection, planning, scheduling, budgeting and evaluating.

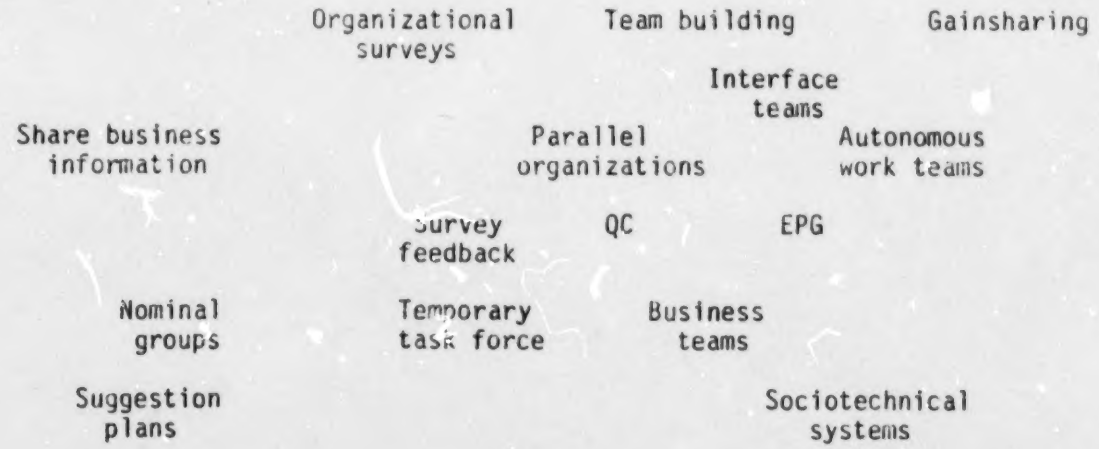
N. Gainsharing

Gainsharing is an effort to improve organizational productivity and quality of work life and to distribute the gains from these improvements through established formulas. The involvement mechanism for gainsharing is dependent upon the specific gainsharing plan and organization.

PARTICIPATION CONTINUUM

| Management Style | Autocratic | Benevolent Autocratic | Consultative | Participative |
|---|---|---|---|---|
| Management Behavior | Give detailed Instructions | Share goals | Ask for input | Share gains |
| Supervisory Behavior | Tell | Sell | Participative | Delegate |
| Employee Behavior | Obey | Obey Willingly | Contribute | Decide |
| Union/Management Relationships | Adversarial | | | Collaborative |
| Communication | Secret | One-Way | Two-Way | Four-Way/Open |
| Organizational Structure | Fragmented Hierarchy | Functional Hierarchy | Matrix | Self-Designing |





SUPPLEMENTAL MATERIALS

I. Articles

Nominal Group Theory Technique

II. Exercixes

1. Management Performance Inventory

2. Participative Climate Diagnosis

III. Case studies

1. Arcata Redwood Company

2. Bendix Corporation

IV. Suggested Films and Audio.Visual Aids

1. "A Case of Working Smarter, Not Harder"
McGraw-Hill Training Systems, P.O. Box 641,
Del Mar, CA 92014

2. "Business, Behaviourism and the Bottom Line"
McGraw-Hill Training Systems

3. "Transitions: Letting Go and Taking Hold"
McGraw-Hill Training Systems

## NOMINAL GROUP TECHNIQUE

I. Nominal Group Technique

A. Uses grass roots method to generate goals, opportunity options or measurement approaches

B. Exploits wisdom inherent in group and combined wisdom of the company

C. Successfully tested in service, manufacturing and research organizations

II. Nominal Group Technique can be used to:

A. Identify areas for productivity improvement

B. Identify goals or new products

C. Prioritize action programs

D. Identify and rank possible measures

E. General problem-solving applications

III. Why "Nominal"?

A. Ordinary group has:

1. Much conversation and persuasion

2. Formal and informal leaders

3. Ill-defined goals and procedures

B. "Nominal" group (group in name only):

1. Controlled interaction; all participants equal

2. Outside leader imposed, "Facilitator"

3. Focused goals and strict procedure

IV. Requirements:

A. Group of 8-15 people, vertical and horizontal representation

B. Facilitator familar with process, NGT not known to group

C. Scribe transcribes ideas, usually insider

D. Suitable meeting room with flip charts and other supplies

E. 2-4 hour time slot

V. Methodology:

A. Statement of problem or task

B. Silent generation of ideas without interaction among participants

C. Round robin presentation of ideas

1. Participants present one idea each, in turn; no discussion

2. Scribe records on flip chart as stated; numbers items sequentially

3. Participant may pass on one round and come in again later

4. Facilitator encourages building on, expanding ideas that others have presented

5. No side comments or discussion permitted

D. Editing and discussion

1. Review each item on flip charts in turn

2. Objective is to clarify and eliminate duplication or broad generalities

3. Allow differing points of view but avoid arguments

4. No discussion allowed on merits of any item

E. Voting and ranking

1. Each participant selects a predetermined small number of items (say 4) from flip charts which he/she believes to be the best solutions; writes each item number and key words on separate 3 x 5 card.

2. After selection, each participant assigns rank (4 = best solution, 3 = next best, etc.) to each of four selections.

3. Cards are collected and rankings tabulated.

F. Facilitator may initiate further discussion to:

1. Examine inconsistent voting patterns

2. Provide opportunity to further examine items which received surprisingly few or many votes

# PART A – PERFORMANCE APPRAISAL

**INSTRUCTIONS:**

1. Identify and list key responsibilities of the employee.
2. Determine the standards by which performance can be objectively determined; i.e., performance is satisfactory when _____ occurs.
3. Indicate what results have been achieved; i.e., performance against standards.
4. Consider the totality of all objective factors and rate the employee.

| | | | |
|---|---|---|---|
| 1 | RESPONSIBILITY:<br>Performance is satisfactory when:<br>a. _____<br>b. _____<br>c. _____ | RESULTS | RATING<br>Below Average / Average / Above Average<br>1 2 3 4 5 |
| 2 | RESPONSIBILITY:<br>Performance is satisfactory when:<br>a. _____<br>b. _____<br>c. _____ | RESULTS | RATING<br>Below Average / Average / Above Average<br>1 2 3 4 5 |
| 3 | RESPONSIBILITY:<br>Performance is satisfactory when:<br>a. _____<br>b. _____<br>c. _____ | RESULTS | RATING<br>Below Average / Average / Above Average<br>1 2 3 4 5 |
| 4 | RESPONSIBILITY:<br>Performance is satisfactory when:<br>a. _____<br>b. _____<br>c. _____ | RESULTS | RATING<br>Below Average / Average / Above Average<br>1 2 3 4 5 |
| 5 | RESPONSIBILITY:<br>Performance is satisfactory when:<br>a. _____<br>b. _____<br>c. _____ | RESULTS | RATING<br>Below Average / Average / Above Average<br>1 2 3 4 5 |

| | | | |
|---|---|---|---|
| 6 | RESPONSIBILITY:<br>Performance is satisfactory when:<br>a. _____<br>b. _____<br>c. _____ | RESULTS | RATING<br>Below Average / Average / Above Average<br>1 2 3 4 5 |
| 7 | RESPONSIBILITY:<br>Performance is satisfactory when:<br>a. _____<br>b. _____<br>c. _____ | RESULTS | RATING<br>Below Average / Average / Above Average<br>1 2 3 4 5 |
| 8 | RESPONSIBILITY:<br>Performance is satisfactory when:<br>a. _____<br>b. _____<br>c. _____ | RESULTS | RATING<br>Below Average / Average / Above Average<br>1 2 3 4 5 |
| 9 | RESPONSIBILITY:<br>Performance is satisfactory when:<br>a. _____<br>b. _____<br>c. _____ | RESULTS | RATING<br>Below Average / Average / Above Average<br>1 2 3 4 5 |
| 10 | RESPONSIBILITY:<br>Performance is satisfactory when:<br>a. _____<br>b. _____<br>c. _____ | RESULTS | RATING<br>Below Average / Average / Above Average<br>1 2 3 4 5 |
| 11 | RESPONSIBILITY:<br>Performance is satisfactory when:<br>a. _____<br>b. _____<br>c. _____ | RESULTS | RATING<br>Below Average / Average / Above Average<br>1 2 3 4 5 |

## PART B – SUPPLEMENTAL INFORMATION

1. List and describe any additional areas where improvement is needed ie. attendance and punctuality, interpersonal relationships, communication skills, etc.

2. List and describe examples of the employee's accomplishments not referred to earlier; ie. participation in special projects, cost reduction/profit improvement suggestions, etc.

3. What are the employee's particular career aspirations at this time?

4. What company sponsored or self-development programs has the employee participated in since his/her last review ie. company training courses, outside university, technical school or correspondence courses, etc.

5. What is your candid assessment of the employee's potential for promotion or advancement?

DATE REVIEWED_____ NEXT REVIEW DATE_____

EMPLOYEE_____

*Signature (only indicates that the employee has seen and discussed this review with the Supervisor).*

EMPLOYEE'S SUPERVISOR_____

*(Signature)*

☐ PERFORMANCE REVIEW ONLY ☐ SALARY MERIT INCREASE REVIEW

RECOMMEND MERIT INCREASE ☐ YES ☐ NO



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# MANAGEMENT PERFORMANCE INVENTORY

| | |
|---|---|
| PURPOSE: | To facilitate the objective appraisal of managerial performance. To assist in the developmental counseling of managers and supervisors and to serve as a vehicle for encouraging professional, career and personal growth. |
| DESCRIPTION: | The Management Performance Inventory is a work standards and objectives oriented performance appraisal form. The semi-structured format of Part A of the instrument facilitates superior—subordinate joint determination of key job responsibilities and specific indicators by which satisfactory performance of each responsibility can be measured. Qualitative rating in each responsibility is on a five point scale. Part B of the instrument provides space for the notation of supplemental information including career aspirations and developmental plans. |
| ADMINISTRATION: | Superior and self-administered. Bi-level (superior & self) measurement option. Requires 45-60 minutes. |
| APPLICATION: | Performance Appraisal.<br>Coaching & Counseling.<br>Training Needs Analysis.<br>Professional & Career Development. |
| SUITABLE FOR: | All management level personnel—line & staff. |
| SCORING: | Not applicable. |

# PARTICIPATIVE CLIMATE DIAGNOSIS

**INSTRUCTIONS**

Following are fifty (50) statements which are relevant to the participative climate of an organization. Please read each statement carefully. Then decide the extent to which you agree with the statement as it applies to the situation in your organization. Indicate your choice by placing a check mark ( √ ) in the appropriate column to the right of each statement.

| | Strongly Agree | Somewhat Agree | Somewhat Disagree | Strongly Disagree |
|---|---|---|---|---|
| 1. New ideas are encouraged and are welcome. | [ ] | [ ] | [ ] | [ ] |
| 2. Work procedures must be followed very closely. | [ ] | [ ] | [ ] | [ ] |
| 3. Management often tries new methods and techniques. | [ ] | [ ] | [ ] | [ ] |
| 4. A great deal of conformity to the status quo is required. | [ ] | [ ] | [ ] | [ ] |
| 5. People really enjoy trying to come up with better ways to do things. | [ ] | [ ] | [ ] | [ ] |
| 6. It is safe to speak up and tell it like it is. | [ ] | [ ] | [ ] | [ ] |
| 7. They make a big secret about everything. | [ ] | [ ] | [ ] | [ ] |
| 8. Important information seldom gets out in time. | [ ] | [ ] | [ ] | [ ] |
| 9. Management communication is usually frank and honest. | [ ] | [ ] | [ ] | [ ] |
| 10. Supervisors are interested in listening to the opinions of employees. | [ ] | [ ] | [ ] | [ ] |
| 11. The responsibility for controlling costs belongs to higher management. | [ ] | [ ] | [ ] | [ ] |
| 12. Each employee has an important impact on costs, quality and productivity. | [ ] | [ ] | [ ] | [ ] |
| 13. There are many opportunities to improve product (or services) quality. | [ ] | [ ] | [ ] | [ ] |
| 14. Supervisors are not interested in controlling costs. | [ ] | [ ] | [ ] | [ ] |
| 15. Employees are truly interested in performing quality work. | [ ] | [ ] | [ ] | [ ] |
| 16. People frequently work together in teams or groups. | [ ] | [ ] | [ ] | [ ] |
| 17. There's a lot of "class distinction" between levels of the organization. | [ ] | [ ] | [ ] | [ ] |
| 18. Most decisions are made by higher management. | [ ] | [ ] | [ ] | [ ] |
| 19. Information is shared with trust and confidence. | [ ] | [ ] | [ ] | [ ] |
| 20. Supervisors often involve employees when making decisions. | [ ] | [ ] | [ ] | [ ] |
| 21. There is a great deal of conflict between departments. | [ ] | [ ] | [ ] | [ ] |
| 22. People are friendly and helpful. | [ ] | [ ] | [ ] | [ ] |

| | Strongly Agree | Somewhat Agree | Somewhat Disagree | Strongly Disagree |
|---|---|---|---|---|
| 23. The relationship between management and employees is good. | [ ] | [ ] | [ ] | [ ] |
| 24. Most senior employees try to help newer employees get adjusted. | [ ] | [ ] | [ ] | [ ] |
| 25. People seem to work well together. | [ ] | [ ] | [ ] | [ ] |
| 26. Work goals or standards of performance are clear and understandable. | [ ] | [ ] | [ ] | [ ] |
| 27. Supervisors seldom say what is expected of you. | [ ] | [ ] | [ ] | [ ] |
| 28. Most work goals or standards are realistic and attainable. | [ ] | [ ] | [ ] | [ ] |
| 29. Employees are seldom told how well they are doing on their job. | [ ] | [ ] | [ ] | [ ] |
| 30. Performance measurement information is fairly accurate. | [ ] | [ ] | [ ] | [ ] |
| 31. The major tools of motivation are reward and punishment. | [ ] | [ ] | [ ] | [ ] |
| 32. Employees are recognized when they do good work. | [ ] | [ ] | [ ] | [ ] |
| 33. Rewards are promised but seldom granted. | [ ] | [ ] | [ ] | [ ] |
| 34. Supervisors help employees gain satisfaction from their work. | [ ] | [ ] | [ ] | [ ] |
| 35. People are motivated to achieve above average performance. | [ ] | [ ] | [ ] | [ ] |
| 36. Management is generally against change. | [ ] | [ ] | [ ] | [ ] |
| 37. Useful new ideas are accepted readily. | [ ] | [ ] | [ ] | [ ] |
| 38. People prefer to do things the old way. | [ ] | [ ] | [ ] | [ ] |
| 39. Most employees are eager and willing to try new methods. | [ ] | [ ] | [ ] | [ ] |
| 40. Change is an accepted way of life. | [ ] | [ ] | [ ] | [ ] |
| 41. When problems arise people tend to deal with them emotionally. | [ ] | [ ] | [ ] | [ ] |
| 42. It is easier to develop solutions than to find causes of a problem. | [ ] | [ ] | [ ] | [ ] |
| 43. If we put our minds to it we can solve our operational problems. | [ ] | [ ] | [ ] | [ ] |
| 44. Management uses fairly effective problem solving methods. | [ ] | [ ] | [ ] | [ ] |
| 45. No one seems willing to take responsibility for making a decision. | [ ] | [ ] | [ ] | [ ] |
| (The following section can be used when employees are represented by a labor organization) | | | | |
| 46. The relationship between the organization and the union is good. | [ ] | [ ] | [ ] | [ ] |
| 47. A lot of the grievances wind up in arbitration. | [ ] | [ ] | [ ] | [ ] |
| 48. Labor contract negotiations usually end productively. | [ ] | [ ] | [ ] | [ ] |
| 49. The union and management cooperate with each other fairly well. | [ ] | [ ] | [ ] | [ ] |
| 50. The labor relations climate is somewhat hostile. | [ ] | [ ] | [ ] | [ ] |

## COMMENTS AND SUPPLEMENTAL INFORMATION

Please use this space for any additional comments or other information that you would like to make concerning the employee involvement or participation climate of this organization.

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# PARTICIPATIVE CLIMATE DIAGNOSIS

| | |
|---|---|
| PURPOSE: | To help assess the readiness of organizational climates for participative or employee involvement programs. To obtain employee perceptions about conditions that can significantly impact on their performance and productivity. |
| DESCRIPTION: | Participative Climate Diagnosis is a measurement instrument that consists of 50 items in ten participative and performance climate categories. Measurement categories include creativity, communication, cost, quality and productivity consciousness, participative environment, interpersonal relationships, performance standards, problem solving, motivational climate, change receptivity and an optional union relations category. Specific issues range from openness and credibility in communication, understanding of work goals, reward systems and resistance to change to rationality and emotionality, diffusion of leadership responsibility and team interaction. Scores are compiled for each category. |
| VALIDITY: | The construct, or syndrome of interrelated behaviors, which is covered by this instrument is both important and useful. In the design of the instrument every reasonable effort was made to ensure proper universe of content, simplicity of item wording and minimization of acquiesence and social desireability. Normative and reliability data are being developed for publication. |
| ADMINISTRATION: | Self or facilitator administered. Requires 15-20 minutes. |
| APPLICATION: | Quality Circle Programs.<br>QWL Programs.<br>Productivity Teams.<br>Attitude & Climate Studies.<br>Participative Management Training. |
| SUITABLE FOR: | Employees at any level. |
| SCORING: | See scoring format on reverse side. |

# PARTICIPATIVE CLIMATE DIAGNOSIS

SCORING INSTRUCTIONS: Determine the point value for your response to each item and enter it in the SCORE column. (SA=Strongly Agree, etc.). Total the scores for all five items in each category and enter in the CATEGORY SCORE box. Enter the scores for each category in the SCORE column of the summary section, total the category scores and enter the sum in the TOTAL CLIMATE SCORE box.

A climate conducive to employee participation involvement is indicated by a TOTAL CLIMATE SCORE of 135 (150 with the Union Relations option) or more. Scores of less than 15 for any category suggest weaknesses in that dimension.

**CREATIVE CLIMATE**

| ITEM | SA | SWA | SWD | SD | SCORE |
|---|---|---|---|---|---|
| 1 | 4 | 3 | 2 | 1 | |
| 2 | 1 | 2 | 3 | 4 | |
| 3 | 4 | 3 | 2 | 1 | |
| 4 | 1 | 2 | 3 | 4 | |
| 5 | 4 | 3 | 2 | 1 | |
| CATEGORY SCORE | | | | | |

**COMMUNICATION**

| ITEM | SA | SWA | SWD | SD | SCORE |
|---|---|---|---|---|---|
| 6 | 4 | 3 | 2 | 1 | |
| 7 | 1 | 2 | 3 | 4 | |
| 8 | 1 | 2 | 3 | 4 | |
| 9 | 4 | 3 | 2 | 1 | |
| 10 | 4 | 3 | 2 | 1 | |
| CATEGORY SCORE | | | | | |

**PRODUCTIVITY CONSCIOUSNESS**

| ITEM | SA | SWA | SWD | SD | SCORE |
|---|---|---|---|---|---|
| 11 | 1 | 2 | 3 | 4 | |
| 12 | 4 | 3 | 2 | 1 | |
| 13 | 4 | 3 | 2 | 1 | |
| 14 | 1 | 2 | 3 | 4 | |
| 15 | 4 | 3 | 2 | 1 | |
| CATEGORY SCORE | | | | | |

**PARTICIPATIVE CLIMATE**

| ITEM | SA | SWA | SWD | SD | SCORE |
|---|---|---|---|---|---|
| 16 | 4 | 3 | 2 | 1 | |
| 17 | 1 | 2 | 3 | 4 | |
| 18 | 1 | 2 | 3 | 4 | |
| 19 | 4 | 3 | 2 | 1 | |
| 20 | 4 | 3 | 2 | 1 | |
| CATEGORY SCORE | | | | | |

**INTERPERSONAL CLIMATE**

| ITEM | SA | SWA | SWD | SD | SCORE |
|---|---|---|---|---|---|
| 21 | 1 | 2 | 3 | 4 | |
| 22 | 4 | 3 | 2 | 1 | |
| 23 | 4 | 3 | 2 | 1 | |
| 24 | 4 | 3 | 2 | 1 | |
| 25 | 4 | 3 | 2 | 1 | |
| CATEGORY SCORE | | | | | |

**GOALS AND STANDARDS**

| ITEM | SA | SWA | SWD | SD | SCORE |
|---|---|---|---|---|---|
| 26 | 4 | 3 | 2 | 1 | |
| 27 | 1 | 2 | 3 | 4 | |
| 28 | 4 | 3 | 2 | 1 | |
| 29 | 1 | 2 | 3 | 4 | |
| 30 | 4 | 3 | 2 | 1 | |
| | | | | | |

**MOTIVATION**

| ITEM | SA | SWA | SWD | SD | SCORE |
|---|---|---|---|---|---|
| 31 | 1 | 2 | 3 | 4 | |
| 32 | 4 | 3 | 2 | 1 | |
| 33 | 1 | 2 | 3 | 4 | |
| 34 | 4 | 3 | 2 | 1 | |
| 35 | 4 | 3 | 2 | 1 | |
| CATEGORY SCORE | | | | | |

**CHANGE**

| ITEM | SA | SWA | SWD | SD | SCORE |
|---|---|---|---|---|---|
| 36 | 1 | 2 | 3 | 4 | |
| 37 | 4 | 3 | 2 | 1 | |
| 38 | 1 | 2 | 3 | 4 | |
| 39 | 4 | 3 | 2 | 1 | |
| 40 | 4 | 3 | 2 | 1 | |
| CATEGORY SCORE | | | | | |

**PROBLEM SOLVING**

| ITEM | SA | SWA | SWD | SD | SCORE |
|---|---|---|---|---|---|
| 41 | 1 | 2 | 3 | 4 | |
| 42 | 1 | 2 | 3 | 4 | |
| 43 | 4 | 3 | 2 | 1 | |
| 44 | 4 | 3 | 2 | 1 | |
| 45 | 1 | 2 | 3 | 4 | |
| CATEGORY SCORE | | | | | |

**UNION RELATIONS**

| ITEM | SA | SWA | SWD | SD | SCORE |
|---|---|---|---|---|---|
| 46 | 4 | 3 | 2 | 1 | |
| 47 | 1 | 2 | 3 | 4 | |
| 48 | 4 | 3 | 2 | 1 | |
| 49 | 4 | 3 | 2 | 1 | |
| 50 | 1 | 2 | 3 | 4 | |
| CATEGORY SCORE | | | | | |

| CATEGORY | SCORE |
|---|---|
| CREATIVE CLIMATE | |
| COMMUNICATION | |
| PRODUCTIVITY CONSCIOUSNESS | |
| PARTICIPATIVE CLIMATE | |
| INTERPERSONAL RELATIONSHIPS | |
| GOALS AND STANDARDS | |
| MOTIVATION | |
| CHANGE | |
| PROBLEM SOLVING | |
| UNION RELATIONS (OPTIONAL) | |
| TOTAL CLIMATE SCORE | |

Arcata Redwood Company
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Director of Personnel, Arcata Forest
Products Group

Type of Program: Survey Feedback, Communications
Date Program Initiated: November, 1978
Organizational Unit: Redwood Operation
Number of Employees Involved: Approximately 390
Worker Classification: Non-union, Exempt and Non-exempt
Structural Characteristics:
Technology -- Manufacturing (Commercial; Some Continuous Process)
Size--Small
Degree of Centralization -- Centralized
Organizational Climate: Primarily Autocratic

The activities at Arcata Redwood Company illustrate how an employee attitude survey can pinpoint specific organizational needs. In this case, Arcata trained its supervisory personnel in behavior modification to help improve intra-organization communications.

## Organizational Background

Arcata Corporation's products and activities consist of printing and printed products; molded containers; and timber and lumber processing. The company produces books, greeting cards, and other paper products; prints magazines, catalogs, directories, brochures and other commercial work; provides microfilming services for hospitals; and produces molded wood pulp and foam plastic products for the packaging and distribution of food. In 1979, corporate net sales were $579.8 million and net income was nearly $30.5 million.

Arcata owns 76,000 acres of timberland in Northern California, where it conducts timber harvesting, reforestation and milling operations. Arcata Redwood Company, which is part of the Arcata Forest Products Group, is a subsidiary of Arcata Corporation. It was formed in the late 1930's to enter the redwood lumber/logging business. Arcata Redwood has slowly developed into a modern forest products company with integrated whitewood/redwood operations. The whitewood operation employs approximately 440 people, while the redwood operations (with which this case study is concerned) employs 390 people.

## History and Development of the Program

Arcata Redwood has had a history of low absenteeism, low turnover, non-union status, good safety records, and positive labor-management

relations. However, in late 1978 the Vice President of Personnel became interested in having an outside consulting firm conduct an attitudinal survey in the company. He suggested this possibility to the President and executive committee. The President of Arcata Redwood wished to learn employees' attitudes toward the company and saw the survey as a means to this knowledge. He issued a memorandum expressing his desire that all operations and staff coordinate and cooperate."

The assessment of employee attitudes through a survey uncovered some deficiencies in the company's employee relations and communications. These results prompted the President to contract further with the same consulting firm for an extensive supervisory/management training program in behavior modification techniques. Although the company has had long-standing good relations with its employees, its management was seeking yet another tool to strengthen this positive relationship and ensure their non-union status.

## Description of the Program

The survey was administered in November and December of 1978 to all salaried employees and a representative group (one-half) of the hourly employees. It was administered by a consultant from the outside consulting firm to groups of no more than 25 people simultaneously. There were a total of 100 questions, answered on a 5-point scale, which assessed the employees' view of the company in seven major areas The areas included (1) written policy and communications, (2) performance measurement and feedback, (3) management, (4) problem solving/decision making, (5) self-management, (6) job satisfaction, and (7) job performance.

The survey results were analyzed and compared with national norms for the same survey items. The consultant reported results of the analysis and comparison first to top management, then to all employees of Arcata Redwood. Employees were pleased to see the results and learn how their attitudes compared with those of employees in other organizations. The survey analysis revealed the need for substantial improvements in intra-organization communications, oral instructions, and feedback to employees.

In response to these needs, the President of the company contracted further with the consulting firm for an extensive management training program in the skills of behavior modification. The program's duration was six months, ending in November of 1979. During these six months, all management personnel (38 individuals) at Arcata Redwood (from the first-line supervisors through the President) met for two hours one night a week with a representative of the consulting firm. The managers were divided into four separate groups (all levels in each group) in order to achieve reasonable-sized groups with which to work. Each group met on a different night. All supervisors were taught the skills of recognizing and positively reinforcing productive behaviors and de-emphasizing negative behaviors, such as excess visiting during work hours.

Supervisors were required to practice their skills through on-the-job projects. To pursue the excessive visiting example, a supervisor would not discipline the visiting employee, but choose a method to positively emphasize not visiting. The supervisor might call a meeting of all those employees who work well and use their time productively just to thank them for the good job they do. Another method of approaching the problem is to measure the group's output and simply report it to them. In these instances, the group members are usually surprised at their low output rate. Therefore, they increase their performance immediately, reducing the amount of time spent visiting. This increased performance is typically a lasting change, rather than a transient one. If the latter strategy is chosen and behavior favorably changes, the supervisor then positively reinforces the involved subordinate(s).

During the six-month training, there were two additional workshops -- one approximately mid-way through the training program and one near the end. Each workshop lasted two and a half days. These workshops afforded the managers the opportunity to practice their new management skills with the observation and feedback of the outside consultants. During this time, everyone had opportunities to role-play with everyone else (from the first line supervisors through the President).

Since completion of the training, many supervisors have continued using behavior modification techniques with their subordinates. Emphasis is on positively communicating with their employees. Supervisors who continue to use the techniques have various feedback projects in operation. Maintenance of the program entails a one-day workshop each year with the managers and outside consultants. Costs of the program were approximately $110,000, including administration and assessment of the survey and six months of consultant time for the training program. The one-day maintenance workshops will add further costs.

## Problems

Difficulties encountered have stemmed from resistance to change on the part of upper and middle management. From the exploration stage through the entire program one particular member of the upper management team was in opposition to all activities. His position was that his management style had been effective thus far and he saw no reason to change. He did participate in the survey and training activities in response to the President's stance on the program.

Since the training program, first-line managers have been the primary group to continue utilizing the behavior modification techniques, communicating with their subordinates. Middle and upper management, for the most part, have reverted to the management styles they utilized prior to the training. It is unclear at this point how this problem will be handled, if at all.

## Results

Impacts of the program fall into three areas: financial, productivity, and employee morale. Results have not been measured on a company-wide basis, however, some isolated changes have been measured.

Financially, management feels the program has been more than justified through cost-savings. One example is the reduced cost of workers' compensation to the company. Since supervisors have been working more closely with their employees, workers have become more safety conscious. This has resulted in reduced accidents to such an extent that from 1978 to 1979 Arcata Redwood's cost of workers' compensation dropped 8 percent, while, according to the Consumer Price Index, the costs of medical care rose 14.6 percent. Management has also noticed that employees are more concerned with energy conservation, as they turn off machines and lights when appropriate.

Improvements have likewise been seen in productivity and quality. One chop line (which is a production line) increased its output 40 percent, while changing from a nine-hour to an eight-hour shift. In another case, at one of the logging sites a crew increased its yard production by 20 percent. In terms of quality, one grade standards crew decreased its percentage of misgraded boards from 10 percent to 4 percent. Each of these three improvements occurred in only one day as a result of precise feedback from supervisors. The improvements were not short-lived, but have been maintained at the increased level.

Upper management has also noticed an improved employee morale. Since the attitudinal survey, many more employees go to the personnel office simply to ask questions or communicate concerns. Employees seem to feel much more comfortable communicating to management. In addition, even though the company is non-unionized, it has had a grievance procedure for its employees since early 1976. There have been no grievances since the management training program ended. Prior to that time two or three grievances a month were commonplace.

## Future Plans

Although there are no extensive plans for the future, the top management group is currently examining the possibility of establishing a number of committees. The committee structure, if established, would provide a vehicle for directing employees efforts to solve work-related problems.

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Automotive Group
Linda Weller Hayward
Superintendent, Printed Circuit Boards
Fabrication
Industrial Controls Division

Type of Program: Communications and Survey Feedback
Date Program Initiated: February 1978
Company Units: 10 Divisions in 7 States and Canada
Number of Employees Involved: 1,950 have been surveyed
Worker Classification: Union and Non-union, Exempt and Non-exempt
Structural Characteristics:
Technology -- Manufacturing; unit
Size -- Small to Medium;
Degree of Centralization -- Decentralized
Organizational Climate: Primarily Consultative

## Company Background

Bendix Corporation has 60 divisions in three business groups: automotive, aerospace-electronics and industrial-energy. Some of their products include auto brake and steering systems, fuel injection units, air and oil filters, aircraft landing gear, missile guidance systems, various aerospace instruments and controls and a wide variety of manufacturing precision tools, equipment and systems.

Net sales in 1980 were $3,861.7 million and net income totaled $191.6 million. Bendix employs approximately 74,500 individuals world-wide. Several divisions are unionized. The major organizing unions are the UAW, IAM, Teamsters, IBEW, and CWA.

## History and Development of the Program

During 1977, there was a union organizing attempt in the automotive division of Bendix. These activities highlighted the need for better communication between management and hourly employees. While examining issues prompting the organization effort, management discovered the critical need for a mechanism through which employees could voice their concerns.

The President of the automotive group turned for assistance to the Corporate Vice President in charge of Personnel. In response, the corporate

staff began to explore alternatives. Such informal techniques as rap sessions, hot lines, and committee meetings were suggested for partial resolution. However, it was felt that a more confidential and anonymous method of communicating was necessary. A survey feedback program was the primary technique selected by the corporate staff.

There were important considerations influencing this decision. Approximately a year earlier, Bendix had contracted with an outside consulting firm to survey a sizable percentage of the corporation regarding communication patterns. The experience was not a positive one. The survey had been mailed to employees' homes and employees completed and returned them by mail. Results of the survey were never reported to employees involved, but a report had been prepared for corporate management. The report had no impact and stimulated no communication changes. This experience, along with social science research supporting the benefits of survey data feedback to employees, convinced the corporate staff of the importance of the data feedback process.

Thus, in February 1978, Bendix made an Employee Survey Data Feedback Program available to the automotive group and any other interested divisions. The primary survey instrument used by Bendix is the Survey of Organizations (SOO) developed by the Institute for Social Research (ISR) at the University of Michigan. This survey was selected because it consists of questions statistically tested for reliability and validity and also because over 100,000 people in various industries have taken the survey, thus furnishing norms with which to compare Bendix survey results. The survey measures a broad spectrum of attitudes including decision making, communication flow, technological readiness, supervisory skills, peer relations, pay satisfaction, work environment satisfaction, etc. Every item (or question) of the survey is answered on a 5-point scale, with 1 and 5 representing opposite ends of a continuum.

## Description of the Program

The emphasis of this case study is on the formal survey feedback process utilized by Bendix. However other successful communication techniques and strategies are also described.

### Employee Survey Data Feedback Program

The survey feedback program at the division level originates with division management. Perhaps the most crucial stage of the feedback process is that of gaining management understanding and commitment. When a division indicates the desire for organization development activity, two corporate staff consultants visit to brief local management concerning the process, benefits, and costs of the Employee Survey Data Feedback Process. The corporate consultants also use this opportunity to learn the needs and concerns of the division. Following this exploratory meeting, if management is willing to fully support the survey feedback activities (including time and resources), the program is begun. If management is not completely

committed to the process, or if some management ulterior motive is perceived by the corporate staff members, the survey feedback program is not pursued.

At this point, division management explains to their employees that there will be a survey, what the process will be, and that the results will be used by management and employees themselves for action-planning purposes. Participants are told of the survey through a variety of means, including written memos or supervisory briefings. The program is promoted as a confidential way to express attitudes and become actively involved in improving all aspects of their work environment. All responses are guaranteed to remain anonymous. Employee participation in the survey feedback process is entirely voluntary.

The second stage of the survey feedback process involves the development of a supplemental questionnaire. A sample of approximately 10 percent of division employees is typically selected by the division's Director of Employee Relations. This sample is representative of the division, cutting across all departments, position levels, ages, and sexes. The sample employees are interviewed by the corporate consultants who ask open-ended questions to allow maximum communication of concerns. Responses to the interviews are analyzed by the corporate team and questions involving areas of frequent concern are included in the survey. In this manner the survey is tailored to the needs of each individual division. A few areas which have been addressed by supplemental questions are benefits, EEO issues, physical layout, management effectiveness, and quality control.

When development of the supplemental questionnaire is complete, the survey is administered by the corporate team. Actual administration takes from one to two hours and usually occurs in a large room (such as the cafeteria) which accommodates many people. Administration sessions have ranged in size from 10 to 80 participants, depending upon room facilities and scheduling preference of each division. Surveys are identified with supervisory code numbers. A work group is composed of a supervisor and all his/her subordinates (from 4 to 80 employees). Each supervisor is assigned a number. When taking the survey, each employee places his/her supervisor's code number on it. Use of this number for identification purposes assures individual anonymity and confidentiality of the work group data.

Completed surveys are sent to the University of Michigan for data processing and analysis. The analysis process takes six weeks and yields several results. First, the mean score for each item of the survey is provided. These means are then compared to those of three different norm groups: the functional area in which the work group operates (i.e. sales/marketing, manufacturing, engineering, management); all individuals who have ever taken the survey; and other individual work groups in the division. These comparisons provide a great deal of information concerning each work group.

Several division employees are selected to function as internal facilitators for the actual data feedback process. The number of facilitators has ranged from 3 to 10, depending upon the size of the division, number of work groups, and the amount of time individual facilitators are available to

perform this role. Individuals selected to be trained as facilitators must meet three criteria. They must be able to maintain confidentiality of information, possess good interpersonal skills, and be perceived as trustworthy and credible by fellow employees. Internal facilitators for Bendix are usually, though not always, supervisory personnel. These employees complete a week-long seminar conducted by ISR in which they learn to interpret survey data and learn interpersonal skills necessary to prepare supervisors for data feedback sessions.

When the data have been analyzed, the data feedback sessions begin. The feedback process always begins with top management, which includes the general manager and directors. This group receives two sets of data. Each individual receives the results for his/her own work group and the results for his/her function. The managers thoroughly review their data and problem-solve before data are given to other groups. In this manner, top management learns what problems exist in their areas and employees see behavioral evidence of top management commitment to the survey feedback process. When feedback to all employees is completed, this top group receives the survey data for the entire division by level across all functions. Feedback sessions to top management are always conducted by outside consultants.

The feedback method employed by Bendix consists of reviewing survey results with supervisors and assisting them in feeding back the data to their work groups. Every supervisor is supplied with a workbook in which to plot each question's mean score and produce a profile of his/her work group. The trained internal facilitators and corporate consultants work with each supervisor individually to help identify the strengths, weaknesses, and concerns of his/her work group. Facilitators role play with the supervisors to prepare them for questions and situations which may arise in feedback sessions. This is an important process since very sensitive issues often emerge and supervisors need to respond constructively.

After each supervisor has reviewed his/her group's survey data and worked with a facilitator, he/she meets with the work group. At this time the supervisor presents the group's survey results and facilitates the group as they identify problems and brainstorm solutions. Each group develops a list of action items in order of priority and sets target dates for completing each item. Examples of action items which have been developed include planning regular work group meetings or rap sessions, using planned agendas for more effective meetings, and clearly defining roles within the group.

When each work group has completed the data feedback session with the supervisor, the formal Employee Survey Data Feedback Process is complete. However, meetings to address the identified problems continue throughout the year until the problems are resolved. Some divisions handle these issues through regular staff meetings. Others have special work group meetings, task forces, etc.

In divisions which are organized, unions have been involved in all survey activities to varying degrees. They have been involved in the initial

briefings and implementation decisions. Union members have been included among those 10 percent interviewed for supplemental question development and questions regarding the unions have been included in the supplemental questionnaire. Finally, organized employees have taken the survey and participated in the data feedback sessions.

The cost of the survey feedback program is viewed in terms of both time and money. A minimum of 8 hours and up to 12 hours is required for supervisory personnel to review their data and prepare for feedback sessions. In addition, the week of training is necessary for internal facilitators, and there is a time commitment for actual survey administration. Monetarily, Bendix spends $16 per person for the process. This figure includes the actual survey instrument for each employee, all data processing, supervisory workbooks, and a final diagnostic report for the division. The cost of training facilitators is $250 per person plus expenses. Any consulting fees are an additional charge.

Other Communication Programs

Bendix has several other employee communication techniques. One of the most extensive of these techniques is the Performance Planning and Review and MBO program. Every salaried employee receives an annual performance appraisal. Performance is evaluated according to the progess that has been made toward written objectives that are mutually established by the employee and supervisor. Supervisors receive at least eight hours of training in conducting appraisals and are evaluated, in part, on the quality of the reviews given to their subordinates. Employees participate actively in this process through self-evaluation and their contribution toward establishing goals. An overall performance rating is given in the annual appraisal of "outstanding", "exceeds requirements", "meets requirements", "below requirements", or "unsatisfactory." The rater's supervisor signs the final appraisal to ensure a fair and equitable review.

Another program which Bendix uses to promote open, systematic communication is its career counseling program for exempt employees. Supervisors attend workshops to learn career counseling skills in problem-solving, planning, goal setting, assessing their performance and situation, establishing priorities and adopting sound managerial practices. In this program individuals identify their short and long-term objectives as well as their own strengths and weaknesses. Management discusses these areas with their employees and informs them of career options and paths, as well as educational and experiential requirements of positions. In some divisions career counseling is handled as part of the performance planning and review sessions. In other divisions, career counseling is viewed as a major effort in itself and the counseling meetings between supervisor and subordinate often occur off-site.

In addition to these employee involvement efforts, Bendix has an active corporate-wide suggestion system which has yielded significant benefits. There are also a number of less formal communication activities including mini-meetings held quarterly in some divisions. In these mini-meetings the general manager shares with hourly employees key operating statistics, the

financial plan for the quarter and how the division performed with respect to the preceeding quarterly plan. In some divisions there are rap sessions, hot lines, and various committees serving a variety of communication purposes.

## Problems

Several problems have been encountered in the survey feedback program. First, some managers have been reluctant to support the large time investment necessary to the program's success. Responding to this problem, the corporate team devotes extra time and effort to explaining what information management will receive, how the information can be utilized, and how to reap benefits from the process. Extra emphasis on these points is required both in the initial briefing sessions and throughout the entire survey feedback process.

A second problem has emerged in every division at the time of survey administration. Even though confidentiality of data and individual anonymity are assured, much skepticism remains at administration sessions. The previous employee survey is often negatively referenced. In order to handle this, the beginning of each administration session is devoted to eliciting employee concerns and reassuring everyone of the confidential and anonymous nature of the survey. The entire data gathering/analysis/feedback process is again explained in great detail at this time. These additional efforts have helped significantly reduce employee doubts.

Another fact which has emerged both in the data feedback process and in the performance review program, is that supervisors experience much anxiety in being candid with their subordinates while discussing survey results or performance. Bendix has responded to this by training supervisors in how to interact when situations are negative or potentially explosive.

A final and related problem has been individual resistance to negative survey data. Some supervisors find it difficult to accept the fact that responses to the survey show their employees feel negatively toward them or aspects of management. Employees also experience anxiety when the data reveal problems within the work group. This resistance is dealt with through extra assistance in preparing supervisors for data feedback sessions.

## Results

The corporate consulting team has made some insightful observations within the divisions with regard to communication in the work setting. First, while interviewing employees on all different levels, the performance and review process was discussed. Nearly everyone has been positive about receiving feedback concerning their performance and approximately 70 percent of those interviewed have talked about wanting and needing more negative and constructive feedback which would help them improve their performance. Hence, the power of feedback has become quite apparent.

A key observation is that first-line supervision is crucial to successful communication and high quality of work life. This level of management is the link between hourly workers and upper management and the corporation.

This group of managers represents "the company" to the hourly workers. Therefore the image they present is exceedingly important to the success of any communication program.

Finally, concepts of employee motivation held by management have been recognized as important factors in productivity and communication. Authoritative managers who hold that money is the prime motivator negatively impact employees. This has been evidenced in situations where shift management is rotated and hourly workers maintain their usual assignments. Productivity and peer interactions deteriorate under the influence of authoritative managers, while the reverse is true with participative managers.

Bendix plans to resurvey divisions participating in the Employee Survey Data Feedback Process to gain data for comparative purposes. These second surveys will be administered 12 to 18 months after the first administration, however that time period has just elapsed and no comparative data is available at this time. Key operating statistics which will be used as criteria for success include absenteeism, turnover, safety, grievances, scrap rates, losses, errors and defects, customer complaints, EEO complaints, OSHA citations, requests for transfers, output per hour, etc. Quality of work life dimensions which will be measured include job satisfaction, peer relations, supervisory skills, pay satisfaction, work environment satisfaction, etc.

Bendix can, however, report some preliminary results from several divisions since their participation in the survey feedback process. One division reduced cost of sales by 27 percent over a five-month period. Another reduced its turnover rate by approximately 11 percent and absenteeism by about 30 percent in a period of eight months. Still another division reduced its scrap rate 68 percent over a six-month time span after the survey feedback process.

During the fiscal year of 1979 the corporation realized a total net savings from its suggestion program of almost $1,443,000 across all divisions. This was an average net savings per 100 employees of $6100. This is slightly higher than the 1978 national average reported by N.A.S.S. of $5035 net savings per 100 eligible employees.

Since Bendix is involved in several productivity and quality of work life improvement efforts, it is not possible to attribute improved performance and satisfaction to any one effort. Thus the corporation remains committed to all their programs.

10/01/81

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# MODULE IV

# TRAINING AND IMPLEMENTATION

Module 4 - Training and Implementation

Overview

I. Training managers and employees

   A. Understanding of roles

   B. Knowledge of program

   C. New skills training

II. Implementing the productivity improvement effort

   A. Enlist participation and support

   B. Communicate effectively

   C. Initiate the effort

Subsection 4.1 - Train Managers and Employees to Provide Role Understanding, Knowledge and Skills

I. Role Understanding

A. Functional Managers

1. Need to be taught how the selected approach will impact their operations.

2. Will it require policy or procedure modifications?

3. Will their active participation be required?

B. Foremen/First-Line Supervisors

1. Need thorough understanding of every detail of the selected approach

2. Will have major responsibility for answering the questions, maintaining the on-going effort, and training employees

3. Need to know if the selected approach will affect their scheduling and assignment methods

4. Need to know what's in it for them

C. Union Officers/Committee Men/Stewards

1. Need to be shown carefully the potential benefits to employees of the selected approach

2. Proper training of this group will eliminate serious problems later

3. Must be shown how productivity improvement can be realized without costing their members' jobs

D. Employees

1. Must be trained ultimately for any approach to be successful

2. Need to know how it will improve productivity

3. What's in it for them?

4. What will be expected from them?

II. Knowledge

A. Policy or procedure modifications

1. Small group meetings to explain changes

2. All changes should be in written form and distributed

B. Scheduling and/or assignment changes

1. Include appropriate employees in decidion process

2. Small group meetings with employees affected by changes

C. Potential Benefits

1. Explain to all employees

2. Elicit feedback

3. Respond to all questions

III. Skills

A. Leadership training

1. Management techniques

2. Management guidelines

3. Positive enforcement techniques

B. Motivation

1. How to motivate one's self

2. How to motivate others

C. Record Keeping

1. Employees should have thorough knowledge of record keeping techniques needed to gather data.

2. Minimize paper work

Subsection 4.2 - Enlist Participation and Support

I. Top Management

A. Provides overall direction and authorization

B. Stays informed on the activities and results

C. Demonstrates total commitment to the effort

D. Maintains high visibility

II. Middle Management

A. Must have thorough understanding of productivity improvement effort

B. Must encourage employee participation

C. Must have ability to train other employees

III. Employees

A. Share business and problem information

B. Immediate feedback by management

C. Building respect and trust

D. Recognition for individual accomplishments

Subsection 4.3 - Communicate Effectively

I. Objectives

A. Increase participation

B. Inform employees

C. Improve job satisfaction

D. Increase trust

II. Areas for analysis

A. Communication policies

B. Management style

C. Communication skills

D. Organizational structure

E. Current communication efforts

III. Techniques

A. Feedback sessions

B. Department/Group Meetings

C. Objective setting

D. Follow-up

## Supplemental Materials

I. Exercises

1. Supervisory Training Needs Analysis
2. Employee Motivation Inventory

II. Case Study

1. Champion International

III. Suggested Films and Audio/Visual Aids

1. "Resolving Conflicts" McGraw-Hill Training Systems, P.O. Box 641, Del Mar, CA 92014
2. "The Power of Listening" McGraw-Hill Training Systems
3. "Verbal Communication: The Power of Words" McGraw-Hill Training Systems
4. "Communication: The Non-Verbal Agenda" McGraw-Hill Training Systems
5. "The Case of the Missing Person" McGraw-Hill Training Systems
6. "A New Look at Motivation" McGraw-Hill Training Systems

# SUPERVISORY TRAINING NEEDS ANALYSIS

**INSTRUCTIONS**

Below are twenty (20) sets of feelings or concerns that are commonly experienced by managers and supervisors. Two alternatives are provided for each set.

Decide the extent to which *each* alternative matches your own feelings or concerns about the issue presented. Then indicate your decisions by placing a check mark ( √ ) in the appropriate column to the right of each alternative. Be sure to indicate the extent of your agreement with *each* of the two alternatives in each set.

| | Strongly Agree | Somewhat Agree | Somewhat Disagree | Strongly Disagree |
|---|---|---|---|---|
| 1. When communicating with employees about job related matters, I wish that I: | | | | |
| a. had something more meaningful to say. | [ ] | [ ] | [ ] | [ ] |
| b. could express myself more clearly. | [ ] | [ ] | [ ] | [ ] |
| 2. When training subordinates in new or revised job methods, I wish that I: | | | | |
| a. had better teaching skills. | [ ] | [ ] | [ ] | [ ] |
| b. understood the job better, myself. | [ ] | [ ] | [ ] | [ ] |
| 3. When trying to motivate employees, I wish that I: | | | | |
| a. understood what motivation really is. | [ ] | [ ] | [ ] | [ ] |
| b. knew how to motivate the average employee. | [ ] | [ ] | [ ] | [ ] |
| 4. When trying to accomplish a job, I wish that I knew how to: | | | | |
| a. set meaningful work objectives. | [ ] | [ ] | [ ] | [ ] |
| b. plan and schedule things better. | [ ] | [ ] | [ ] | [ ] |
| 5. When disciplining an employee, I wish that I knew: | | | | |
| a. how to be firm, yet fair at the same time. | [ ] | [ ] | [ ] | [ ] |
| b. more about our work rules and policies. | [ ] | [ ] | [ ] | [ ] |
| 6. When dealing with low performance employees, I wish that I knew: | | | | |
| a. why people perform as they do. | [ ] | [ ] | [ ] | [ ] |
| b. how to determine root causes of low performance. | [ ] | [ ] | [ ] | [ ] |
| 7. When improving employee work performance, I wish that I knew how to develop: | | | | |
| a. an effective remedial plan. | [ ] | [ ] | [ ] | [ ] |
| b. improved work methods with the employee. | [ ] | [ ] | [ ] | [ ] |
| 8. When making work assignments, I wish that I knew how to: | | | | |
| a. select the best person for the job. | [ ] | [ ] | [ ] | [ ] |
| b. give clear, understandable instructions. | [ ] | [ ] | [ ] | [ ] |
| 9. When communicating with my boss, I wish that I knew: | | | | |
| a. what to keep him/her informed about. | [ ] | [ ] | [ ] | [ ] |
| b. how to talk with him/her about sensitive issues. | [ ] | [ ] | [ ] | [ ] |

| | Strongly Agree | Somewhat Agree | Somewhat Disagree | Strongly Disagree |
|---|---|---|---|---|
| 10. When making decisions, I wish that I knew how to: | | | | |
| a. use rational or scientific decisions making methods. | [ ] | [ ] | [ ] | [ ] |
| b. get more participation from my subordinates. | [ ] | [ ] | [ ] | [ ] |
| 11. When handling employee complaints and problems, I wish that I knew how to: | | | | |
| a. listen more effectively. | [ ] | [ ] | [ ] | [ ] |
| b. determine what the real problem is. | [ ] | [ ] | [ ] | [ ] |
| 12. When dealing with my subordinates, I wish that I: | | | | |
| a. understand more about human behavior. | [ ] | [ ] | [ ] | [ ] |
| b. knew how to develop better teamwork. | [ ] | [ ] | [ ] | [ ] |
| 13. When dealing with people in other departments, I wish that I knew how to: | | | | |
| a. coordinate work activities better. | [ ] | [ ] | [ ] | [ ] |
| b. gain more cooperation. | [ ] | [ ] | [ ] | [ ] |
| 14. When dealing with my own affairs, I wish that I knew how to: | | | | |
| a. organize my time better. | [ ] | [ ] | [ ] | [ ] |
| b. avoid interruptions and other time wasters. | [ ] | [ ] | [ ] | [ ] |
| 15. When writing reports, I wish that I knew: | | | | |
| a. more about grammar and punctuation. | [ ] | [ ] | [ ] | [ ] |
| b. how to express myself in writing more clearly. | [ ] | [ ] | [ ] | [ ] |
| 16. When counseling an employee about work performance, I wish that I knew how to: | | | | |
| a. set objective work standards. | [ ] | [ ] | [ ] | [ ] |
| b. conduct a good performance appraisal interview. | [ ] | [ ] | [ ] | [ ] |
| 17. When handling a union grievance, I wish that I: | | | | |
| a. knew more about the union contract. | [ ] | [ ] | [ ] | [ ] |
| b. had more skill in dealing with union officials. | [ ] | [ ] | [ ] | [ ] |
| 18. When exercising leadership, I wish that I knew: | | | | |
| a. more about what qualities a leader should have. | [ ] | [ ] | [ ] | [ ] |
| b. what kind of leadership style to use. | [ ] | [ ] | [ ] | [ ] |
| 19. When trying to improve my department's effectiveness, I wish that I: | | | | |
| a. could improve the attitude of my subordinates about quality. | [ ] | [ ] | [ ] | [ ] |
| b. had a better understanding of productivity improvement methods. | [ ] | [ ] | [ ] | [ ] |
| 20. When dealing with difficult and frustrating situations, I wish I knew how to: | | | | |
| a. remain calm and minimize stress. | [ ] | [ ] | [ ] | [ ] |
| b. handle the situation effectively. | [ ] | [ ] | [ ] | [ ] |

## COMMENTS AND SUPPLEMENTAL INFORMATION

1. Briefly summarize the non-technical (supervisory, managerial or administrative) areas in which you would benefit from further skill development.

2. In what technical job skills would you benefit from further education and/or skill development?

3. What courses, workshops or seminars have you attended during the past 5 years?

4. Additional comments:

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# SUPERVISORY TRAINING NEEDS ANALYSIS

| | |
|---|---|
| PURPOSE: | To identify supervisory training needs in both supervisory process functions and practices, as well as in key interpersonal skill areas. To facilitate developmental counseling and coaching of managers and supervisors. |
| DESCRIPTION: | The Supervisory Training Needs Analysis questionnaire is an excellent diagnostic tool to help in pinpointing development needs for managers and supervisors. The instrument consists of twenty (20) sets of conditions (feelings or concerns) that any manager or supervisor might have about his or her practices, ability and skills. Respondents are asked to evaluate the extent of their agreement with paired alternatives (40 item total) for each set. A Likert type scale is used. Specific issues covered include communicating with subordinates, peers and superiors, written communication, subordinate training, making work assignments, handling problems, complaints, grievances and employee discipline, motivation skill, decision making and problem solving, improving work performance, planning and scheduling and much more. |
| VALIDITY: | The construct, or syndrome of interrelated behaviors, which is covered by this instrument is both important and useful. In the design of the instrument every reasonable effort was made to ensure proper universe of content, simplicity of item wording and minimization of acquiesence and social desireability. Normative and reliability data are being developed for publication. |
| ADMINISTRATION: | Self or facilitator administered. Requires 15-20 minutes. |
| APPLICATION: | Training Needs Analysis.<br>Coaching and Counseling. |
| SUITABLE FOR: | Managers and supervisors at any level. |
| SCORING: | See scoring format on reverse side. |

# SUPERVISORY TRAINING NEEDS ANALYSIS

SCORING INSTRUCTIONS: Determine the point value for each alternative (a & b) and enter it in the SCORE column to the right. (SA=Strongly Agree, SWA=Somewhat Agree, etc.). Add the point values of both alternatives for each SKILL DIMENSION and enter the sum in the TOTAL box in the SCORE column. SKILL DIMENSION scores of 6 or more suggest possible training needs.

| NO | SKILL DIMENSION | ALT | SA | SWA | SWD | SA | SCORE |
|---|---|---|---|---|---|---|---|
| 1 | COMMUNICATION WITH SUBORDINATES | a | 4 | 3 | 2 | 1 | |
| | | b | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 2 | TRAINING EMPLOYEES | a | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 3 | MOTIVATING EMPLOYEES | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 4 | PLANNING & SCHEDULING | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 5 | HANDLING EMPLOYEE DISCIPLINE | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 6 | DIAGNOSING PERFORMANCE PROBLEMS | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 7 | IMPROVING WORK PERFORMANCE | a | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 8 | MAKING WORK ASSIGNMENTS | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 9 | COMMUNICATING WITH SUPERIORS | a | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 10 | MAKING DECISIONS | a. | 4 | 3 | 2 | 1 | |
| | | b | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |

| NO | SKILL DIMENSION | ALT | SA | SWA | SWD | SD | SCORE |
|---|---|---|---|---|---|---|---|
| 11 | HANDLING COMPLAINTS & GRIEVANCES | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 12 | INTERFACING WITH SUBORDINATES | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 13 | INTERFACING WITH PEERS AND OTHERS | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 14 | MANAGING TIME | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 15 | WRITING REPORTS | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 16 | COUNSELING EMPLOYEES | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 17 | DEALING WITH UNIONS | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 18 | PRACTICING LEADERSHIP | a. | 4 | 3 | 2 | 1 | |
| | | b. | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 19 | IMPROVING DEPARTMENT EFFECTIVENESS | a. | 4 | 3 | 2 | 1 | |
| | | b | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |
| 20 | MANAGING DIFFICULT SITUATIONS | a. | 4 | 3 | 2 | 1 | |
| | | b | 4 | 3 | 2 | 1 | |
| | | | TOTAL | | | | |

# EMPLOYEE MOTIVATION INVENTORY

**INSTRUCTIONS**

The following are forty (40) pairs of needs or goals which could apply to anyone. Read each pair carefully. Decide which one of each pair is of greater interest to you. Then indicate your choice by checking ( √ ) the alternative that you have selected. Be sure to make and indicate a choice for each of the forty (40) pairs.

| | |
|---|---|
| 1. ____ a. To have more rest.<br>____ b. To have more insurance. | 12. ____ a. To be recognized for good work.<br>____ b. To be in the company of others. |
| 2. ____ a. To have more friends.<br>____ b. To have more sufficient meals. | 13. ____ a. To have a nicer house.<br>____ b. To be in better physical condition. |
| 3. ____ a. To have more clothing.<br>____ b. To have a more prestigious job. | 14. ____ a. To be protected from unfair treatment.<br>____ b. To enjoy more luxuries. |
| 4. ____ a. To obtain further education.<br>____ b. To have better housing. | 15. ____ a. To join a prestigious club.<br>____ b. To be liked by others. |
| 5. ____ a. To have more job security.<br>____ b. To have better health. | 16. ____ a. To have a challenging job.<br>____ b. To have a privileged parking space. |
| 6. ____ a. To have pleasant co-workers.<br>____ b. To have a better retirement plan. | 17. ____ a. To have an interesting job.<br>____ b. To be less tired. |
| 7. ____ a. To have improved medical insurance.<br>____ b. To have a larger office. | 18. ____ a. To have more insurance.<br>____ b. To have job satisfaction. |
| 8. ____ a. To have a feeling of achievement.<br>____ b. To take fewer risks. | 19. ____ a. To develop new skills.<br>____ b. To engage in social activities. |
| 9. ____ a. To be part of a group.<br>____ b. To lose weight. | 20. ____ a. To own an expensive car.<br>____ b. To have more control over a job. |
| 10. ____ a. To have a secure job.<br>____ b. To be accepted by others. | 21. ____ a. To eat better.<br>____ b. To have more responsibility. |
| 11. ____ a. To be on a team.<br>____ b. To be with important people. | 22. ____ a. To gain fame.<br>____ b. To exercise more. |

23. _____a. To get more sleep.
_____b. To be needed by others.

24. _____a. To be more cautious.
_____b. To have more nourishing food.

25. _____a. To have safer work conditions.
_____b. To accomplish something important.

26. _____a. To have a better title.
_____b. To have better insurance protection.

27. _____a. To have a secure position.
_____b. To help co-workers with their work.

28. _____a. To have a job.
_____b. To be protected against loss.

29. _____a. To enjoy friends.
_____b. To increase your knowledge.

30. _____a. To be socially prominent.
_____b. To belong to a club.

31. _____a To feel wanted.
_____b. To have freedom from layoff.

32. _____a. To feel physically well.
_____b. To be a team member.

33. _____a. To have a privileged parking space.
_____b. To improve the quality of your life.

34. _____a. To be on a team.
_____b. To live in a prestigious neighborhood.

35. _____a. To have a position of importance.
_____b. To be careful at work.

36. _____a. To have more energy.
_____b. To own an expensive car.

37. _____a. To advance into a higher position.
_____b. To become famous.

38. _____a. To be accepted by your friends.
_____b. To achieve your full potential.

39. _____a. To enjoy your work.
_____b. To have greater self confidence.

40. _____a. To improve your physical condition.
_____b. To assume more responsibility.

Below are descriptions of five conditions that you could now be experiencing in your life. Please place a check mark ( √ ) in the box to the left of the description that most closely corresponds to how you feel about your life at this time.

| | |
|---|---|
| 1 | Right now I am mostly concerned about protecting what I have. Good job security, health and medical insurance, and the protection of my physical well-being are examples of what I need most. |
| 2 | More and more I find myself searching for true satisfaction in life. I want to reach my full potential and gain a sense of real fulfillment. |
| 3 | I have acquired most of the necessities that I need and feel reasonably secure and protected from loss. What I really want now is to concentrate more in my relationships with other people. |
| 4 | The most important thing right now is to get or to hold on to a decent job. I want to earn enough so that I can provide for the basic necessities of life. |
| 5 | I am fairly comfortable with what I have acquired and with my dealings with others. What is especially important right now is to see the results of my past efforts in terms of the extras that I can afford. |

# EMPLOYEE MOTIVATION INVENTORY

| | |
|---|---|
| PURPOSE: | To assist managers and supervisors to evaluate the current motivational needs or goals of their subordinates. To provide employees with objective feedback regarding their current motivational needs or goals. |
| DESCRIPTION: | Employee Motivation Inventory is a paired comparison measurement instrument designed to identify motivational needs and goals against a self-actualization scale. The instrument consists of forty (40) pairs of alternative needs or goals. Five (5) sets of eight pairs of needs or goals are constructed to provide a weighted ranking of perceived needs or goals with respect to Maslow's Hierarchy of Human Needs; i.e., physiological (basic), safety or security, affiliation, status and self-actualization. Respondents choose between the two alternative items in each pair. Scores are calculated for each of the five categories. Multi-level format facilitates superior, peer and subordinate assessments. |
| VALIDITY: | The construct, or syndrome of interrelated behaviors, which is covered by this instrument is both important and useful. In the design of the instrument every reasonable effort was made to ensure proper universe of content, simplicity of item wording and minimization of acquiesence and social desireability. Normative and reliability data are being developed for publication. |
| ADMINISTRATION: | Self or facilitator administered. Requires 20-25 minutes. |
| APPLICATION: | Employee Motivation Studies.<br>Management and Supervisory Training.<br>Self Development.<br>Human Relations Training.<br>Coaching and Counseling. |
| SUITABLE FOR: | Employees at any level. |
| SCORING: | See scoring format on reverse side. |

# EMPLOYEE MOTIVATION INVENTORY

SCORING INSTRUCTIONS: Circle the letter that represents your choice to the numbered item selected in both Columns A and B. Add the number of letters circled in each motivational need column. Plot these scores in the appropriate columns of the Motivational Needs Graph.

**COLUMN A**

| | (1) BASIC/SURVIVAL NEEDS | (2) SECURITY NEEDS | (3) AFFILIATION/SOCIAL NEEDS | (4) STATUS/EGO NEEDS | (5) SELF ACTUALIZATION/FULFILLMENT NEEDS |
|---|---|---|---|---|---|
| 1 | a | b | | | |
| 2 | b | | a | | |
| 3 | a | | | b | |
| 4 | b | | | | a |
| 5 | b | a | | | |
| 6 | | b | a | | |
| 7 | | a | | b | |
| 8 | | b | | | a |
| 9 | b | | a | | |
| 10 | | a | b | | |
| 11 | | | a | b | |
| 12 | | | b | | a |
| 13 | b | | | a | |
| 14 | | a | | b | |
| 15 | | | b | a | |
| 16 | | | | b | a |
| 17 | b | | | | a |
| 18 | | a | | | b |
| 19 | | | b | | a |
| 20 | | | | a | b |
| SUB COLUMN A | | | | | |

**COLUMN B**

| | (1) BASIC/SURVIVAL NEEDS | (2) SECURITY NEEDS | (3) AFFILIATION/SOCIAL NEEDS | (4) STATUS/EGO NEEDS | (5) SELF ACTUALIZATION/FULFILLMENT NEEDS |
|---|---|---|---|---|---|
| 21 | a | | | | b |
| 22 | b | | | a | |
| 23 | a | | b | | |
| 24 | b | a | | | |
| 25 | | a | | | b |
| 26 | | b | | a | |
| 27 | | a | b | | |
| 28 | a | b | | | |
| 29 | | | a | | b |
| 30 | | | b | a | |
| 31 | | b | a | | |
| 32 | a | | b | | |
| 33 | | | | a | b |
| 34 | | | a | b | |
| 35 | | b | | a | |
| 36 | a | | | b | |
| 37 | | | | b | a |
| 38 | | | a | | b |
| 39 | | b | | | a |
| 40 | a | | | | b |
| SUB. COLUMN B | | | | | |
| SUB COLUMN A | | | | | |
| TOTAL COLUMNS A & B | | | | | |

**MOTIVATIONAL NEEDS GRAPH**

| | (1) BASIC/SURVIVAL NEEDS | (2) SECURITY NEEDS | (3) AFFILIATION/SOCIAL NEEDS | (4) STATUS/EGO NEEDS | (5) SELF ACTUALIZATION/FULFILLMENT NEEDS |
|---|---|---|---|---|---|
| 16 | | | | | |
| 15 | | | | | |
| 14 | | | | | |
| 13 | | | | | |
| 12 | | | | | |
| 11 | | | | | |
| 10 | | | | | |
| 9 | | | | | |
| 8 | | | | | |
| 7 | | | | | |
| 6 | | | | | |
| 5 | | | | | |
| 4 | | | | | |
| 3 | | | | | |
| 2 | | | | | |
| 1 | | | | | |

**CONDITIONS SCORE**

1 = SECURITY NEEDS

2 = SELF ACTUALIZATION/FULFILLMENT NEEDS

3 = AFFILIATION/SOCIAL NEEDS

4 = BASIC/SURVIVAL NEEDS

5 = STATUS/EGO NEEDS

Champion International
Champion Paper Division
P. O. Box 872
Pasadena, Texas
Management Contacts: William Goacher, Manager, Operations Improvement
William Smith, Involvement Team Coordinator

Type of Program: Involvement Teams
Date Program Initiated: Fiscal 1977
Organizational Unit: All Champion Paper Mills
Number of Employees in Program: Approximately 800
Worker Classification: Union, Non-Union, Exempt Salaried, Non-Exempt Salaried and Hourly
Structural Characteristics:
Technology: Manufacturing (Continuous Process)
Size: Large
Degree of Centralization: Decentralized

Involvement Teams at Champion International have been very successful, growing in number to comprise 70 teams in 1980. Employees have received increased job satisfaction and an improved rapport with their supervisors. Management strongly supports the program and plans to expand involvement teams in other areas of operation.

## Organizational Background

Champion International is a publicly owned corporation with total sales of $3.8 billion and a net income of $247.1 million in 1979. The company manufactures and markets wood-based building materials, papers and paper packaging. It owns or controls substantial land and timber resources in the United States, Canada, and Brazil.

The paper division consists of three pulp mills and four paper mills. The paper mill in Pasadena, Texas has approximately 1600 employees, 1100 of whom are members of the United Paperworkers International Local 1305.

## History and Development of the Plan

The management at Champion Papers wanted employees more involved in solving the problems of their own areas of operation. Management believed that a team approach would help employees develop a better understanding of the entire plant operation and would increase their job satisfaction as they were given the opportunity to participate in decisions that would affect them.

At the Pasadena mill, the union-management relationship is stable and there were no union objections to the implementation of involvement teams. Management was strongly committed to and supportive of the program.

Management began an awareness program to demonstrate its desire to get employees involved. As teams started and word spread that ideas were being implemented, employees became interested and participation increased.

Description of the Plan

When a specific problem is identified in an area of the mill, the area supervisor begins coordinating efforts to form a team. The supervisor talks with first line supervision and employees in the area to determine if they want to join a team to solve the problem. If they are receptive to the idea, the mill involvement team coordinator begins the process of setting up a new team. The team is usually selected by first line supervision and consists of 8-10 members. Leaders of the teams usually come from first line supervision, but do not dictate wishes to the rest of the team.

Once the team has been identified, the mill involvement coordinator schedules a four-hour indoctrination session. The corporate coordinator comes to Pasadena to conduct this session, which is held away from the mill in a relaxed environment. The corporate coordinator's involvement provides the team members with a sense that corporate management is aware of their involvement and supports the program.

The corporate coordinator begins by stating the benefits of involvement: job satisfaction and morale are increased; money-saving improvements are produced; jobs become easier to perform; human relations problems associated with change are more readily handled. Next, through participation exercises, the team is shown the advantages of group involvement. These include personal enjoyment and improvement and the rewards of being identified as a member of a successful team.

The corporate coordinator then discusses motivational techniques. Physical and psychological threats are negative motivators and incentives and bonuses are positive. However, neither of these are long-term approaches. People must be self-motivated in order for their interest and enthusiasm to last.

At the conclusion of the corporate coordinator's session, team members are aware of the advantages of the team approach.

The team meets for at least one hour per month to discuss the problem and possible solutions. The mill involvement team coordinator helps set up the meetings, provides information to the team when necessary, and keeps all records of team activities. Equipment utilization and maintenance are two common problems often investigated by involvement teams. When a solution is found, the team presents it to the area supervisor, who reviews it and decides if it should be implemented.

Once the problem has been solved, the team then turns its attention to other problems which are determined to be significant by the team and/or management. Because of this, the teams continue to exist on a somewhat permanent basis.

Team members receive recognition for their contributions through certificates of appreciation, announcements in company publications, and an annual picnic at the plant level for team members and other contributors to the Cost Improvement Program.

## Results

The Pasadena Mill had 23 teams in operation at the time of this update in December, 1980. Exact costs of the program have not been kept, but the major expenses are the time of the corporate and mill coordinators and the time of employees to attend meetings. If team members work overtime on team projects, they are paid in accordance with the union contract.

Champion estimates that involvement teams have saved $1 million in 1980 at the Pasadena Mill and $7 million in the entire paper division. Employees have received increased job satisfaction through involvement and improved relationships with their supervisors.

## Future Plans

Champion International plans to expand the number of involvement teams in fiscal 1981. With this expansion the company plans to introduce involvement teams to other areas of operation. Also planned is a revised procedure for selection of team members. An improved program utilizing involvement team is management's goal.

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# MODULE V

# EVALUATION AND MAINTENANCE

Module 5 - Evaluation and Maintenance

Overview

I. Document progress of the productivity improvement effort

   A. Measure results

   B. Analyze findings

      1. What worked?

      2. What failed?

      3. Why?

II. Modify failing or marginal efforts

III. Diffuse successful efforts

   A. Publicize results

   B. Build on successes

Subsection 5.1 - Document Progress by Measuring Results and Analyzing Data

I. The evaluation and maintenance phase of the productivity improvement process is the time when the results of the productivity improvement efforts are measured, analyzed, documented, reported, publicized, recognized, and rewarded.

II. The evaluation and maintenance phase will involve everyone who has been associated with the productivity improvement effort in one or more of the following areas:

   A. Reviewing Productivity Goals

   B. Reviewing Objectives

   C. Reviewing Overall Performance Measures

   D. Collecting and Analyzing Data

   E. Drafting Reports/Recommendations

   F. Reviewing Recommendations

   G. Administering Recognition and Rewards

   H. Communicating Results

III. Important questions to be answered are:

   A. Were the objectives met?

   B. Do our results reflect occurrence of the sought-after changes?

   C. What were the specific improvements?

   D. Did the effort pay off?

      1. Were there net gains/losses?

      2. How were employee attitudes affected?

      3. What are the bottom-line benefits?

   E. Where do we need to modify approaches?

   F. Where can we capitalize further on the successes?

   G. Who were the "heroes" and how should they be rewarded?

Subsection 5.2 - Evaluation Design

I. All evaluations are basically some form of comparison. For example, the comparison may be with pre-established objectives; with a carefully selected "control group", or in terms of historical trend. There are many evaluation designs. Four commonly used types are:

A. Planned versus Actual Performance:

This design compares the actual program performance with a formal set of objectives or expectations contained within a plan or other corporate document.

B. Time Trend:

This design compares the actual current performance with past performance trends as established over many periods of observation.

C. Before versus After:

This design is a two-point comparison of performance values taken just prior to implementation of a change with measures of those same values after one business period.

D. Comparison to Control:

This design compares performance of a test group or organization with that of another comparable installation, firm or group either inside or outside of the organization.

II. Selection of an evaluation design depends on:

A. The existence or not of clear objectives and/or comparable examples

B. The availability of data

C. The amount of time and effort available for the evaluation phase

D. The sensitivity of the measurement system

III. Keys to successful evaluations:

A. Clearly defined program goals, objectives, targets

B. Representative measures of performance at all levels of the organization

C. Accurate and complete data

D. Isolation of extraneous influences

1. Concurrent program changes
2. Major disturbances in the organizational environment
3. Business conditions

Subsection 5.3 - Diffuse Successful Efforts

I. Rewards and Recognition

   A. Monetary

   B. Non-monetary

II. Publicize successful efforts

   A. Bulletin board

   B. Newsletters

   C. Monthly bulletins

   D. Department/group meetings

## SUPPLEMENTAL MATERIALS

I. Exercises

The exercises included in the previous four modules can be administered again to identify change

II. Case Studies

The case studies included in the previous four modules may be reviewed for possible solutions to specific trouble areas.

III. Films and audio/visual aids

None